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FIELD MUSEUM OF NATURAL HISTORY.

PUBLICATION 206.

REPORT SERIES. VOL. V, NO. 6.

ANNUAL REPORT OF THE DIRECTOR

TO THE

BOARD OF TRUSTEES

FOR THE YEAR 1920.

CHICAGO, U. S. A.
January, 1921.

DUPLICATE
Illinois State Library.

BIOLOGY

FREDERICK J. V. SKIFF HALL.

This hall contains ores of the precious and base metals, building stones and marbles and various non-metallic minerals of economic importance.

State Museum
Springfield, Ill.

FIELD MUSEUM OF NATURAL HISTORY.

PUBLICATION 206.

REPORT SERIES. VOL. V, No. 6.

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BEQUESTS.

Bequests to Field Museum of Natural History may be made in securities, money, books or collections. For those desirous of making bequests to the Museum, the following form is suggested:

FORM OF BEQUEST.

I do hereby give and bequeath to "FIELD MUSEUM OF NATURAL HISTORY" of the City of Chicago, State of Illinois,_____

_____

_____

_____

_____

Cash Contributions made within the taxable year to Field Museum of Natural History to an amount not in excess of 15% of the tax payer's net income are allowable as deductions in computing net income under the Revenue Law.

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DIRECTOR.

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FAY COOPER COLE, *Assistant Curator Physical Anthropology and Malayan Ethnology.*

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J. ALDEN MASON, *Assistant Curator of Mexican and South American Archæology.*

HELEN C. GUNSAULUS, *Assistant Curator of Japanese Ethnology.*

DEPARTMENT OF BOTANY.

CHARLES F. MILLSPAUGH, *Curator.*

B. E. DAHLGREN, *Assistant Curator Economic Botany.*

EDWARD T. HARPER, *Assistant Curator of Cryptogamic Botany.*

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OLIVER C. FARRINGTON, *Curator.* H. W. NICHOLS, *Assistant Curator.*

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DEPARTMENT OF ZOÖLOGY.

CHARLES B. CORY, *Curator.*

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WILLIAM J. GERHARD, *Assistant Curator of Entomology.*

EDMOND N. GUERET, *Assistant Curator of Osteology.*

R. MAGOON BARNES, *Assistant Curator of Oölogy.*

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THE N. W. HARRIS PUBLIC SCHOOL EXTENSION.

S. C. SIMMS, *Curator.*

RECORDER.

D. C. DAVIES.

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THE LIBRARY.

ELSIE LIPPINCOTT, *Librarian.*

EMILY M. WILCOXSON, *Assistant Librarian.*

January 1, 1921.

ANNUAL REPORT OF THE DIRECTOR.

1920

To the Trustees of Field Museum of Natural History:

I have the honor to present a report of the operations of the Museum for the year ending December 31, 1920.

In every respect the year just closed must be considered as the most important and momentous in the history of the organization. The completion of the New Building, with the exception of the terrace, approximately five years from the date when construction operations were inaugurated, and its occupancy are two factors which make the period not alone noteworthy, but also establish a new epoch in the dissemination of scientific knowledge. The Building may be said to have been completed on or about June 1, 1920, but the transfer by rail of the collections and equipment commenced on the 26th day of April and was practically concluded by June 4th. The actual moving operations by railroad thus consumed thirty-four working days. The plans for moving and the organization for carrying on the task had been given careful consideration before work was begun and it is a matter of congratulation that the undertaking was carried through to its consummation without an untoward occurrence of any nature and without serious damage to the material transported. As it was thought advisable to move the heavier objects by motor trucks, this method of transfer was inaugurated early in March and continued with few interruptions daily until the beginning of September. In all 354 loads were handled in this manner and these were carried with the same satisfactory result as the loads transported by railroad. As soon as moving operations were concluded, installation was immediately undertaken as reviewed elsewhere in this report. It may be said at this date that fully one-third of the exhibition cases in the Museum have been finally placed, reinstalled and in a great many instances entirely relabeled. There is every indication that the entire exhibition area will be completely installed on or about the first of May 1921, when it is intended that the Museum shall be re-opened to the public.

During the year the President of the Museum, Mr. Stanley Field, contributed the sum of $100,000.00 toward the deficit in the New

Building Fund. The Board of Trustees in accepting this very generous gift, expressed their appreciation with more than ordinary emphasis.

It is a pleasure also to announce that a contribution of $50,000.00 in the form of 500 shares of 7% preferred stock has been made by Mr. Edward E. Ayer, the income of which after the death of Mrs. Ayer and the donor is to be expended for the purchase of scientific books, pamphlets and publications for the general Library of the Museum. This provision for the future development of the Museum Library is only another instance of Mr. Ayer's life-long devotion and generosity to the Museum. In view of the continued interest manifested by Mr. Ayer in the expansion of the Library and especially on account of his contributions in money and books to the ornithological section, it has been decided to name the ornithological Library of the Museum the "Edward E. Ayer Ornithological Library."

Grateful acknowledgment is made of the contribution of the sum of $10,000.00 from the Honorable Charles R. Crane, or so much thereof as may be necessary to complete the publication of the work being prepared by the Curator of Zoölogy on "The Birds of the Americas."

The additions to the scientific staff and maintenance forces during the latter part of the year, having caused a deficit in the available funds for the operation of the Museum, amounting to $19,755.32, at the December meeting of the Board, the President announced that Mr. Marshall Field had volunteered to assume this deficit.

President Field has further contributed the sum of $1,000.00 toward the publication of a "Record of the Life of the North American Indian," which is to consist of twenty volumes of text and illustrations and twenty accompanying portfolios of copper plates and photogravures, with the understanding that the Museum Library is to receive a set of the work when completed.

The Corporate Members at a meeting held in May, decided to amend the Articles of Incorporation, so as to provide for an increase in the Board of Trustees of the Museum from fifteen to twenty-one members. At this date four of the created vacancies have been filled by the election of Mr. John Borden, Mr. Albert W. Harris, Mr. Solomon A. Smith and Mr. James Simpson.

Through the further efforts of President Field to increase the Life Membership of the Institution, the following were elected during the year: J. B. Lord, Thomas W. Hinde, Adolph Nathan, George D. McLaughlin, Lawrence M. Viles, D. W. Buchanan, Frank O. Wetmore, Alexander Smith, David M. Yates, Clifford M. Leonard, Frank W. Porter, Charles H. Schweppe, William Wrigley, Jr., Charles Piez, James B. Forgan, John McKinlay, Potter Palmer, Francis S. Peabody,

Charles H. Morse, Jr., George Alexander McKinlock, John C. Shaffer, Dorr E. Felt, A. Watson Armour, Theodore C. Keller, E. D. Hulbert, Frank S. Cunningham, Henry W. Farnum, B. E. Sunny, John Barton Payne, Honore Palmer, Alfred Decker, David R. Forgan, George F. Getz, Clarence M. Woolley, John Burnham, Augustus S. Peabody, Samuel M. Hastings, P. D. Block, Joseph H. Defrees, Arthur T. Aldis, John F. Jelke, E. J. Lehmann, George L. Veatch, Eugene B. Clark, Oliver T. Wilson, Norman Bridge, W. H. Miner, Clive Runnells, N. Landon Hoyt, William P. Martin, Robert Stuart, Robert W. Stewart, Henry P. Crowell, Gustavus S. Fernald and William E. Clow.

Mr. James Simpson was elected a Patron of the Museum, in recognition of the eminent service he has rendered to the Institution.

Amendments to the By-Laws made during the year have created two new classes of memberships, Associate Members and Sustaining Members, and have also provided additional privileges for all classes of memberships. These privileges are indicated in the revised By-Laws which will be found in this report. In this connection also, an agreement has been entered into with other contemporary institutions for an interchange of courtesies and privileges for Life and Annual Members.

The Board of Trustees had presented for their consideration during the year a proposal from the South Park Commissioners, asking the consent of the Trustees to the erection by the Commissioners of a Stadium, which it is proposed to construct on the south side of the Museum building and which would encroach one hundred and twenty feet, approximately, upon the restricted areas, which under the terms of the contract between the Museum Trustees and the South Park Commissioners providing a site for the Museum building, it was agreed should remain free of structures unless otherwise concurred in by the Museum. After full consideration of the request, the Trustees gave their consent to the construction of the Stadium as shown on the plans submitted.

The ordinance under which the South Park Commissioners set aside a tract of land in Grant Park for the site of the new building, in consideration of which dedication the Institution is to be open free to the public three days in each week, having been brought to the attention of the Board of Trustees, it was decided that the Museum should be open free to the public on Thursdays, Saturdays and Sundays.

During the year arrangements were made with the Illinois Central Railroad to construct a foot-bridge over the tracks of the railroad at Park Row which would permit foot passage from the Park Row station platform, or from the Park just outside of the retaining walls east and west of the tracks, the Museum to assume the cost of the structure.

This bridge has been completed and has greatly increased the means of access to the Museum.

The scope of the Stanley Field Museum Employes Pension Fund has been enlarged by its founder, the execution of an insurance contract with the Aetna Insurance Company covering the lives of the personnel of the Museum, with the premium paid out of this Fund, having been authorized. In this contract it is stipulated that continuous service for one complete year is pre-requisite to securing any insurance and that the insurance automatically ceases upon the termination of the services of the insured. Employes, who on February 1, 1920, had not been in the service of the Museum for one complete year, automatically become insured at the conclusion of that period, and are progressively entitled to increasing benefits as set forth in the schedule adopted. This insurance is without cost to the insured and imposes no obligation not already attending the services of the employe.

MAINTENANCE.—The sum of $170,200.00 was appropriated by the Board of Trustees for the necessary expenses of maintenance during the fiscal year. The cost of maintenance, however, amounted to approximately $190,000.00, thus creating a deficit of approximately $20,000, which, as referred to elsewhere in this report, was contributed by Mr. Marshall Field.

MOVING OPERATIONS.—The following is a brief summary of the extent and cost of the transfer of all collections, material and equipment from the old building in Jackson Park to the new building in Grant Park.

Time:

Duration of transportation by rail, April 26, 1920, to June 4, 1920, inclusive, omitting Sundays and one holiday	34 days
Duration of transportation by auto truck (capacity five tons), March 3, 1920, to October 2, 1920 (not continuous)	132 days

Quantities:

Number of freight cars loaded and unloaded	321
Number of motor truck loads (loaded and unloaded)—capacity 5 tons	354
Glazed and unglazed exhibition cases moved—average size twelve feet in length and eight feet in height	1,727
Number of cases "knocked-down" and partly dismantled	98

MOVING OPERATIONS

Loading cars at Jackson Park, Old Building. Platform capacity, ten fifty-foot cars.

Number of boxes, crates, barrels, packages, and other parcels specially prepared for transporting . . .	11,645
Office furniture and effects, books and publications in carriers, maintenance equipment, photographic equipment, printing shop equipment, pieces and objects .	8,006

Cost:

Cost of packing supplies, covering a period of two years	$ 4,897.52
Total cost of moving operations not to exceed—(some unrendered bills estimated)	70,000.00

Damage:

Repairing material damaged in actual transit . . .	1,250.00
Repairing material damaged during packing operations including the replacing of all broken glass	2,800.00

Remarks:

The plan of the operation provided placing the cases and objects transported upon a definite floor area or in a particular room or a designated section, where it is intended they shall remain in the new building.

The number of checkers employed at loading platform at old building and at unloading platform at new building 11

(All volunteered from the personnel of the Museum)

Comparison of the loading sheets with the unloading sheets both by rail and truck, shows not one article or object has apparently been lost or misplaced in the process of the transfer.

Estimated cost of glass moved, at present day prices $753,000.00

PUBLICATIONS.—During the year one publication was issued, detail of which follows:

Pub. 205.—Report Series, Vol. 5, No. 5. Annual Report of the Director for the year 1919. January 1920. 69 pages, 14 halftones, edition 2,000.

THE LIBRARY.—Notwithstanding the limitations that existing conditions have imposed, the customary activities of the Library have been carried on with a fair measure of success. There have been received by gift, exchange and purchase 1,088 books and pamphlets. The Library contains 73,824 books and pamphlets. Cards written and filed in the catalogues number 6,690. The transfer of the contents of the library to the new building was accomplished by using cartons, large wooden containers and motor trucks. The space at present assigned

to the office of the Library and the stack room is on the second floor. The four departmental libraries are located on the third floor in rooms adjoining each of the departments. The task of installing the exhibition halls has employed all assistance available and the work of shelving the libraries is in abeyance until the stack rooms can be completed when considerable time and labor will be necessary to reëstablish the sequence of the original classification. The decision to have all literature pertaining to the work of the departments placed in their respective libraries necessitates a number of transfers and until these transfers are effected and inventories taken it is not possible to accurately state the number of books and pamphlets in each library. The books of the anthropological and botanical departments have been placed on the shelves. In the Department of Anthropology discarded exhibition cases were converted into book cases and used to good advantage. The library's generous patron, Mr. Edward E. Ayer, presented the rare eight volume edition of Audubon's Birds of North America. During the year Mr. Ayer caused to be ordered one hundred and fourteen volumes of ornithological works. Of these eighty-one volumes have been received, a number of which are rare copies dating back to 1776, and all are beautifully illustrated. A catalogue of all the ornithological works in the library is in preparation, at the request of Mr. Ayer, who has expressed a desire to supplement his already splendid collection until it provides workers and students with as complete an ornithological reference library as is obtainable. Gifts, gratefully received from other sources, are acknowledged as such in the list of accessions appended to the report. Exchanges were received from four hundred and ninety-six institutions and individuals. The first consignment of the publications of the Museum, since pre-war days, was forwarded during the year to all countries where international exchange service has been resumed. The continued upward trend of the cost of all publications very seriously affects scientific literature. Various societies that have existed mainly for the publication of the results of scientific research have had to either suspend publishing for the time being or discontinue exchange relations and ask for subscriptions to enable them to continue their work. Five new exchanges were effected with the following: Federated Malay States Museums, Kuala Lumpur; Museo de Etnología y Antropología de Chile, Santiago de Chile; Ornithological Society of Japan, Tokyo; Manchester Geographical Society of England; R. Academia de Ciencias y Artes, Barcelona. Comparatively few purchases of books have been made as the time of the staff has been wholly occupied with installation work. Subscriptions were entered for seventy-eight periodicals.

DEPARTMENTAL CATALOGUING, INVENTORYING, AND LABELING.—During the year the work of cataloguing in the Department of Anthropology has been carried on as new accessions were acquired. In the division of Mexican and South American archæology, the remainder of the Zavaleta collection, as well as the material from Ecuador and the West Indies received last year, as an exchange, from the Museum of the American Indian, New York, has been catalogued. The total number of catalogue cards prepared amounts to 1,646. These cards are distributed over the divisions as follows: Southwest, Mexican and South American Archæology 1,501; North American Ethnology 4; Malayan Ethnology 118; China, Japan and India 16; Near East Archæology and Ethnology 3; and African Ethnology 4. These cards have been entered in the inventory books of the Department, which now number thirty-eight. The number of annual accessions amounts to twenty, eighteen of which have been entered. The total number of catalogue cards entered from the opening of the first volume amounts to 155,194. A new and vigorous campaign in label writing and printing was inaugurated during the last months of the year. The progress made so far has been entirely satisfactory, numerous new labels having been added to the exhibition cases. The total number of these labels amounts to 4,139, distributed as follows: North West Coast 96; New Guinea 870; Mexico and South America 2,316; Philippines 173; China, Tibet and Korea 442; Ainu and Siberia 239; Japan 3. There were 393 new label cards added to the label file. The printer supplied the department with 975 catalogue cards.

As very little new material has been added to the organized collections in the Department of Botany during the year, on account of the necessities contingent upon moving, only 231 incidental entries have been made in the department catalogues, bringing the total entries up to 482,310. The card indices of the department have been augmented as follows:

	No. of Cards	
	Augmented 1920	Total
Index to Botanical Species	4,585	156,618
Index to Common Names	76	20,375
Index to Yucatan Plants	5	6,367
Index to Euphorbiae	7	4,232
Index to Department Labels	36	3,136
Index to Geographic Localities	11	2,767
Index to Collectors	2	9,864
Index to Botanical Titles	75	1,575
Index to Department Library	.....	8,800
Index to Illinois Flora	110	910
Index to Hand Specimens of Wood	1,646	2,446
Index to Installations	.....	595
Index to Photographs	.....	600

All accessions in the Department of Geology have been fully catalogued as received, the largest number appended being obtained by the addition of the specimens of the Frederick J. V. Skiff collection. In packing or installing the older collections specimens occasionally were found which had been overlooked in previous cataloguing, and the opportunity was improved to record these also. The total number of entries made during the year was 452. During the installation of the cases in the new building, all missing or soiled labels have been replaced as fast as the cases were installed, by new ones. As considerable care was taken in packing the labels from the old installation so that loss or injury should be avoided, the instances where such labels needed replacement were fortunately few. New labels were also provided for any specimens added that had not previously been installed, and the form, wording or size of some of the old labels was changed in instances where this seemed desirable. The total number of re-installed cases completely labeled during the year is 70 and the total number of new labels that have been prepared is 668.

Cataloguing in the Department of Zoölogy during the year was reduced to that which was absolutely necessary, namely 45 entries in Mammalogy and 247 in Ornithology. Many exhibition labels have been prepared, including an entirely new set for the large habitat groups of mammals.

The following table shows the work performed on catalogues and inventorying accomplished:

	No. of Record Books	Total No. of Entries to Dec. 31, 1920	Entries During 1920	Total No. of Cards Written
Department of Anthropology	38	155,194	1,646	155,334
Department of Botany	58	489,310	234	87,409
Department of Geology	22	141,472	452	8,456
Department of Zoölogy	40	101,304	281	34,696
The Library	14	117,766	6,690	283,716
Section of Photography	20	121,239	395	.....

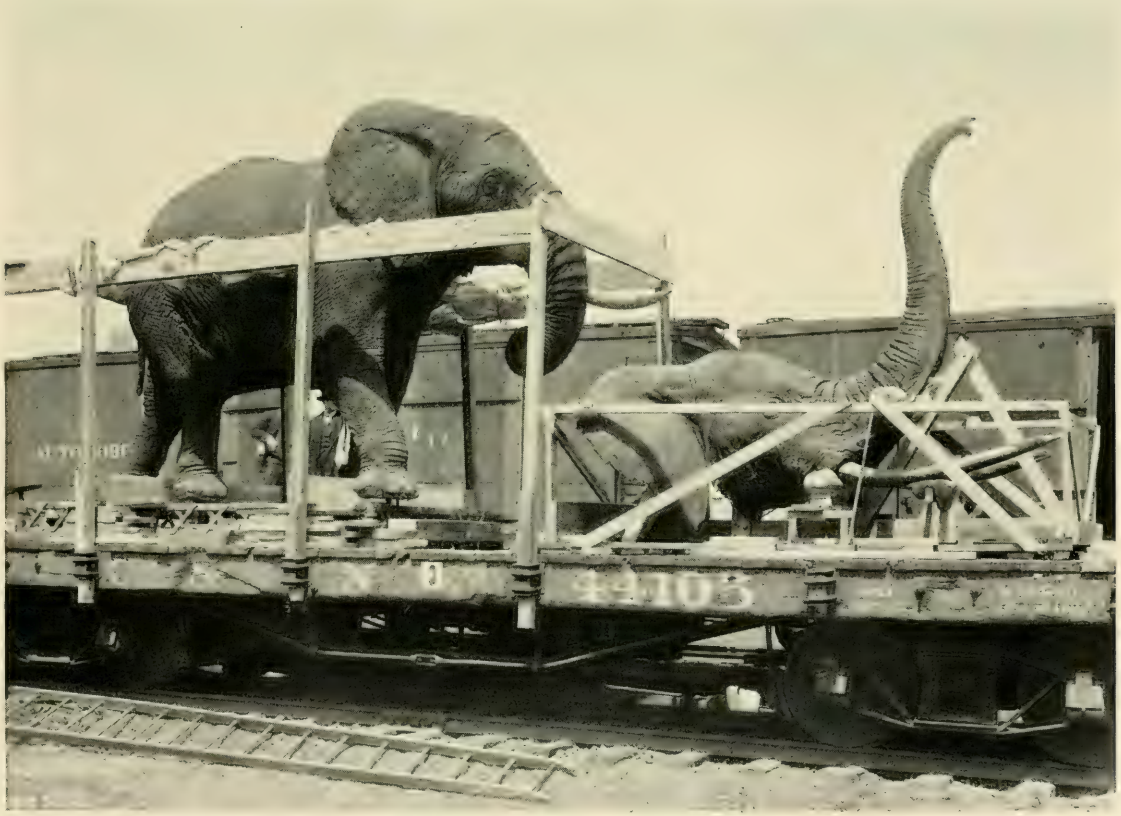
ACCESSIONS.—The most notable gift of the year in the Department of Anthropology is the valuable collection of Indian baskets from British Columbia and California made by Mr. Homer E. Sargent in the course of fifteen years and presented by him to the Museum. The present contribution of 342 baskets is merely the first installment; there are several hundred more to come by next spring. This extensive collection comprises excellent and partially old specimens from the Hupa, Pomo, Paiute, Panamint, Maidu, Mono, Chumashan, Diegeno, Chemehuevi, Navaho, and other tribes. Mr. Edward E. Ayer presented to the department a kris from the Moro on the Philippines, a Pima basket from California, several interesting objects from the Tlingit and Eskimo

of Alaska, and a Pomo feather headband. Mr. George A. Crofts of Tientsin, China, remembered the Museum with a gift of two large, remarkable clay statuettes of the T'ang period (A.D. 618–906), which have been added to the Blackstone Collection, and are placed on exhibition in a case of mediæval clay figures. The gift of Mr. and Mrs. Edwin F. Gillette of a set of Japanese dolls for the Dolls' Festival (*Hina Matsuri*) is a distinct addition to the Division of Japanese Ethnology. The group, illustrated in this Report, consists of a painted screen and nine dolls representing the emperor and empress of Japan, the elder and younger ministers of state, and an orchestra of five court-musicians, exactly as it would appear in a Japanese home on the occasion of the Dolls' Festival held each year for the pleasure and instruction of little girls. Such sets, handed down as family heirlooms, are taken out of the storehouse annually, carefully unpacked, and displayed for a week on a series of shelves covered with scarlet cloth. There are generally arrayed before the dolls miniature pieces of furniture, various articles for the house reproduced oftentimes in gold lacquer or in porcelain, such as tiny tables upon which are placed offerings of food prepared by the little girls, an act which in itself tends toward promoting a deep reverence for the emperor and a knowledge of the old court and its customs. The sixfold screen, which serves as a background, possesses great merits in color and decoration. Above a stream, near which grow iris, peonies, and a sturdy pine; a white crane flies downward toward two others standing on the bank. The golden-flecked clouds and the soft greens and reds in decoration blend admirably with the brocade costumes of the dolls immediately in front of the screen. These figures, made of enameled wood, are modeled with remarkable care, each expressing a distinct personality. As an illustration of the exactitude of execution, the hands and wrists of the old minister of state, which delineate real age, are truly of admirable workmanship. The costumes are all of brocade, probably a hundred years or more in age, which in itself is of value for the study of textiles and design. The head-dresses, of which there are three distinct types, besides the elaborate head-dress of the empress, are removable and exact copies of the style worn at court by the various characters here represented. The emperor and empress sit upon raised platforms, magnificently clothed, each possessing emblems characteristic of their offices. The empress holds a small folding-fan of wood painted with the favorite decoration of the crane flying above the pine, bamboo and plum, a combination emblematic of long life. The emperor, wearing a large sword, holds in his right hand a flat wooden baton of tablet shape (*shaku*), generally carried by all noblemen at the court. The old and young ministers are equipped with

bows, arrows, and swords. Swords are also thrust in the belt of each of the five court-musicians, two of whom sit upon lacquered stands while the other three squat upon the ground. The musical instruments, the flute, the hand-drum, and flat-drum, are faithfully reproduced in miniature. Under the auspices of Mr. William Wrigley, Jr., the Museum entered into an agreement with the Museum of the American Indian of New York City, for the purpose of organizing an extensive archaeological survey of Catalina Island on the Californian coast. The understanding was that the material resulting from this exploration should be equally divided between the two institutions. The field-work was placed in charge of Mr. George G. Heye, Director of the Museum of the American Indian, and conducted during last summer. As a result of these excavations, the Museum received from Mr. Heye in November a large quantity of archaeological material, consisting chiefly of pestles, mortars, and other implements of stone, particularly steatite, bone, shell, and clay. The collection is thoroughly representative of that culture-area. In order to make this collection more interesting and to illustrate some of the adjacent cultures in connection with it, Mr. Heye added to it as a gift to the Museum a considerable collection from San Nicholas and San Miguel islands, California, which contains a number of fine prehistoric shell and bone ornaments.

The notable additions to the herbaria during the year are: the first installment of the E. T. and S. A. Harper mycologic collection, consisting of about 10,000 specimens; the Santa Catalina Island collections of C. F. Millspaugh (595) and L. W. Nuttall (946 specimens); Pennell's North American (55) and U. S. Colombian (33) Scrophulariaceæ; Mrs. Wilcoxson's Massachusetts plants (95 specimens); Howe's distribution of Marine Algæ, principally West Indian and Bahaman (146 specimens); Maxon & Killip's Jamaican Plants (1,128 specimens); E. T. & S. A. Harper's Virginia and Massachusetts fungi of 1920 (210 specimens); and Ames' Bornean Orchids.

Of especial importance among the accessions of the year in the Department of Geology the Curator of the department reports that the collection of ores and minerals presented by Dr. Frederick J. V. Skiff is of especial interest and value. The Curator states: "This collection contains not only many specimens unique in beauty and rarity, but also some which since they came from localities from which it would be impossible, at the present time, to obtain specimens, may be considered priceless. Series of special interest and value in the collection are the following: A number of specimens of free gold, especially from South American localities and specimens of placer gold from Colorado and Idaho; other gold ores; platinum from the Urals; some fine speci-



AFRICAN ELEPHANTS IN TRANSIT TO NEW BUILDING.
One specimen required removal of the head; the other traveled intact.

mens of amethyst; excellent specimens of turquois, tiger eye and thomsonite; some unique crystals of calcite from Joplin, Mo., showing a new crystal habit; silver ores showing free silver from several localities; and concentrates from various ores. The total number of specimens in the collection is 277." Mr. William J. Chalmers presented for addition to the William J. Chalmers crystal collection a remarkable pseudomorph of quartz after crystallized spodumene from Greenwood, Maine. Mr. Chalmers also presented a valuable book of photographs of the diamond mines at Kimberley, South Africa. This book contains 114 original prints illustrating various phases of the processes of mining at the Kimberley mines and covering chronologically nearly the entire history of the mines. The United Verde Company and United Verde Extension Company of Bisbee, Arizona, and the New Cornelia Copper Company of Ajo, Arizona, presented full series of the various ores mined by them and specimens of the associated rocks. These series in connection with specimens previously presented by the Utah Copper Company, afford material for fully illustrating the developments which have taken place in recent years in the utilization of the low-grade copper ores, usually known as "porphyry coppers." Specimens of both leaching and flotation ores are included in the series. These series all form important additions to the collection of copper ores. The kind offices of Mr. William J. Chalmers in assisting in procuring these gifts are gratefully acknowledged. A cast of the Yenberrie, Australia, iron meteorite was presented by the United States National Museum and a full-sized, polished section of the meteorite was purchased. Dr. A. de Chairmont presented nine individual aerolites of the Holbrook, Arizona, fall. By exchange with the University of Chicago a nearly complete skeleton in matrix of the rare Permian, lizard-like reptile, Varanosaurus, from Texas, was obtained, also from the same institution and in a similar way a prepared male skull and dentition of the extinct ungulate Diceratherium, from the Miocene of Nebraska.

The principal accession in the Department of Zoölogy during the year was the collection of 676 specimens, chiefly mammals and birds, obtained by Assistant Curator Osgood and Mr. H. B. Conover on the expedition to Venezuela of which mention is made elsewhere. Mr. Conover also presented to the Museum skulls and scalps of one moose and two caribou from northwest Canada. An important addition to the exhibition collection of mammals was a mounted giraffe presented by Mrs. Mollie Netcher Newbury. A collection of 270 salt and fresh water fishes from Louisiana was received in exchange from the Southern Biological Supply Company of New Orleans. The invertebrates received during the year consisted of a donation of over 8,800 shells

and 49 sea-urchins, starfish, etc., mostly collected by the late Mrs. Fanny Sonshine and presented to the Museum by her daughter, Miss B. Sonshine. A temporary addition to the Division of Entomology consisted of the twenty-year deposit of the Garry de N. Hough Collection of flies, received from the University of Chicago. The value of this material is mainly due to the fact that it is rich in authentically named species of certain families of European and North American muscid-like flies. This collection will prove useful for comparison when naming some of the Museum material. It will also be helpful to students who are interested in the families represented.

EXPEDITIONS AND FIELD WORK.—Through the generous co-operation of Mr. H. B. Conover it was possible to make one short but important expedition during the year. Assistant Curator Osgood, accompanied by Mr. Conover, left late in January for northwestern Venezuela and returned to the Museum in the latter part of May. They worked in the tropical lowlands surrounding Lake Maracaibo and in the Sierra de Perijá near the boundary between Venezuela and Colombia. Later they penetrated the interior south of Lake Maracaibo to the highlands of the Sierra de Merida, working at various levels up to an elevation of 15,000 feet. The collections and physical data obtained supplement the results of previous expeditions in an important way and make the Museum collection of the vertebrates of this general region the most comprehensive in existence. In prosecuting this work, the members of the expedition were greatly assisted by officials of the Caribbean Oil Company, notably Mr. F. R. Bartlett. They were much indebted also to Señor Juan E. Paris, a prominent and public-spirited citizen of Maracaibo.

INSTALLATION, REARRANGEMENT, AND PERMANENT IMPROVEMENT.—The Department of Anthropology was engaged during the first half of the year in packing material for removal to the new building. The method of packing adopted proved so efficient that no essential damage was done to any specimen, whether large or small, during the removal. On moving into the new building in June, the staff put in order and arranged the offices, work-rooms, store-rooms, and laboratories assigned to the department on the third floor. An immense number of crates, boxes, and packages had been accumulated in Installation Room 34, during moving-time. These were checked up with the records, sorted, and relegated to the various sections to which the material belongs. Cabinets for storage were placed in work-rooms, several storage racks and seven layout tables were made. Hundreds of exhibition cases were stripped of packing

material, numerous crates and boxes were opened, and the material arranged either for exhibition or study and exchange collections. The best possible use has been made of the space available on the third floor. Rooms 65 and 66 are utilized for the storage of East Asiatic collections. Room 50 contains Japanese material, Room 48 Melanesian collections, the greater part of which are stored in the Installation Hall, Room 46 North American archæology, Room 44 Indian blankets and baskets, Room 42 Hopi material, Room 43 Southwest, Navaho and Mission Indians material, Room 40 Mexican and South American archæology, Room 33 Northwest Coast collections, and Room 34 Malayan material. Exchange material is placed in Rooms 30 and 31. Room 28 is allotted to study collections. Work on actual installation of exhibition cases was begun on September 20th. During this brief period of three months a total of 249 cases was installed or re-installed. These cover all sections of the department. The Philippine Hall, 55 cases, with the exception of the large group-cases, the Chinese collections on the East Gallery Hall of the second floor, 64 cases, save several large wall cases, and the greater portion of the West Gallery Hall, can now be reported as being completely installed. Hopeful progress has been made in the Joseph N. Field Hall (Melanesia), the Mexican and South American Hall, the Southwest Hall, and the hall allotted to Egyptian and classical archæology. In the Mexican and South American Hall, nine cases have been newly installed; these illustrate Calchaqui stone work, ethnology of the Upper Amazon, Brazil, Paraguay, Peru, and Ecuador, and Maya and Mexican archæology. In every instance, exhibition material was carefully sifted, and the new arrangement is considerably improved upon the old system. A special hall, located on the ground floor along the east side of the building, having been assigned to the department for the exhibition of primitive means of navigation, 82 boats were placed and arranged in the hall during August. Five exhibition cases, two illustrating boat-models from China, two with boat-models and other means of transportation from India and Burma, and one with similar material from New Guinea, were moved in and placed at a somewhat later date. When completed this hall will prove an attractive feature in the building. It was decided to discard from exhibition all table and upright cases which were found to be no longer serviceable and hardly in harmony with the character of the new halls. This step necessitated a complete vacating of these cases containing large storage bases in which a large quantity of material had been packed for transportation. This material has been temporarily stored in Room 45 on the third floor. The Departmental Library has been completely arranged and set in order in twenty-three cabinets in Room

39. With the co-operation of the departmental staff, the Museum librarians completed this task within a few weeks. As all books pertaining to anthropology, also those formerly stacked in the main library, are now assigned to the departmental collection, it was necessary to prepare a new set of catalogue cards in conformity with this new arrangement, and the number of the cabinet in which a book is placed has been added to each card, so that it is possible to promptly locate a volume. The Bagobo group has been completed and the figure of the Hopi boomerang-thrower remodeled.

In the Department of Botany the entire staff of the department proper was employed during the first five months of the year in finishing preparation for moving into the halls and rooms set aside for it in the new building. The specimens in all those exhibition cases not prepared during the closing months of the previous year were secured in place, or packed in containers, and properly marked and labeled to designate the position they were destined to occupy. The entire herbaria and all other material, supplies, appliances, etc., were, in like manner, prepared for transportation. The month of May and part of June were employed in superintending the removal of the packed material from the old building and the placing of the same in position in the new. In September re-installation began both in the exhibition halls and the working rooms. Since that date the books of the Department Library have been temporarily shelved and arranged, the phanerogamic herbarium fully organized, and most of the laboratories at least partly equipped for work. On account of alterations deemed expedient in the departmental arrangement as originally planned, it became necessary to change the installation of a large number of cases previously considered complete. These re-installations have consumed a large amount of time and rendered re-installation far slower than was expected, setting back the anticipated completion of the department at least five months. Contributory to this extra work has been the elements of the unfinished character of the halls and the dust raised in the work of their completion. This has caused more cleaning of specimens and repainting of case interiors than could have been foreseen. In Hall 28 one hundred and ten case units have been placed. These are devoted entirely to all those plant families the elements of which are on hand at this time. The installation will comprise plant reproductions and natural specimens embracing the taxonomy of about 100 families. Of these 81 are now installed. Hall 27, Foreign Woods: In this hall the cases have not yet been shifted to their intended position. They will require comparatively little interior arrangement when once set, as the contents are now in place. Hall 26, North American Trees: The

MOVING MOUNTED SKELETON OF EXTINCT UNGULATE (ALLOPS MARSHI) INTO NEW BUILDING.

cases in this hall are in position. They will require little interior work done upon them. Halls 25 and 29, Economic Botany: The cases in these two halls are substantially all placed and 71 units have been re-installed complete. The herbarium, in its organization, had been separated into four great divisions: (1) *Flowering Plants*, completely organized; (2) *Fungi;* (3) *Cryptogams in General,* ferns, mosses, lichens, hepatics, etc.; (4) *Plants of Illinois.* Each of these herbaria occupy contiguous rooms. As the plants of Illinois are more frequently consulted by amateurs in botany than those of the general herbaria, it has been considered best to segregate them, thus securing the main herbaria against disorganization by untrained botanists. During the first four months of preparation for moving the Section of Plant Reproduction continued its regular work with but little interruption. The months of May and June were then utilized entirely in the work of packing, dismembering, moving and re-establishment in the laboratories in the new building. In July the work of the section was again established, though during the last few months of the year it has been greatly interfered with through the necessity of utilizing a large part of the effort of the staff in the re-installation of cases in the exhibition halls. No damage whatsoever was sustained by the large number of delicate models and reproductions packed, or secured against the anticipated rough handling of the cases and packages during transportation. Notwithstanding the large amount of time consumed in these necessary interruptions to the regular work of the staff, the section finished the following productions, all of which are now installed in the exhibit cases of Hall 28: The Fig (*Ficus carica*). A natural size branch of the tree in full leaf and fruit; an enlarged section of the edible fig revealing the numerous flowers enclosed within the fleshy, hollow receptacle; an enlarged section of the Caprifig with male and female flowers; an enlarged female flower in section; an enlarged male flower with its bracteal envelope; an enlarged gall-flower showing the female caprifying insect emerging; and full descriptive labels detailing "caprification." The Seven-year Apple (*Casasia clusiifolia*). A small branch of the shrub with fully matured fruit fallaciously said to "require seven years to ripen." The Kaffir Orange (*Strychnos spinosus*). A flowering and fruiting portion of this shrub of the Strychnine Family. While nearly all species of this group are virulently poisonous this particular one develops an edible, spicy fruit. An enlarged flower of this plant reveals the essential organs characteristic in the family. Avocadoes or Alligator Pears (*Persea Persea*): fruits of four characteristic varieties of this delicious "Salad Fruit" now becoming noticeable in our markets through its cultivation in southern Florida. The four

varieties reproduced are: The West Indian; The Guatemalan; The Mexican; and a hybrid secured by crossing the Guatemalan and the Mexican. The Coconut (*Cocos nucifera*): enlarged male and female flowers together with a section of the female flower revealing its essential characters. The Spider Lily (*Hymenocallis caribaea*): a full size flowering plant. Cotton plant (*Gossypium barbadense*): an entire plant in full leaf, flower and ripe boll, natural size; an enlarged flower, in section, revealing the essential organs. Zamia (*Zamia floridana*): enlarged sporophylls and a fruiting cone of this species illustrating the floral characteristics of the cycads. Mangoes (*Mangifera indica*): three varieties of this delicious fruit of the Sumac Family, now being cultivated for the market in southern Florida: "The Mulgoba," "The Haden," and "The Amiri." A Green Alga (*Oedogonium*): eight enlargements illustrating reproduction in this group; whole mass of the plant, magnified; asexual reproduction, the oögonia; the sperm cells; dwarf males; resting stage, oöspore; germination, zoöspores; fertilization. A Green Alga (*Ulothrix*): four enlargements illustrating this genus: A piece of a filament, spore formation; swarm-spores, germination; conjugation; zygospores. More or less work has also been done on the following studies now in process of production: Coconut (*Cocos nucifera*); reproduction of a natural size tree top in leaf, full flower and fruit. Zamia (*Zamia floridana*); a full size plant of this important starch-producing cycad. Four-'o-Clock (*Mirabilis jalapa*); a portion of a natural size plant and a number of various colored flowers, designed to illustrate Mendelian principles of heredity. Screw Pine (*Pandanus utilis*); reproduction of a portion of the plant, natural size. Pride-of-India (*Melia Azedaracka*); an enlarged flower revealing the essential organs, to illustrate characteristics of the Mahogany Family. Alga (*Bryopsis plumosa*); an enlarged tip of a frond.

During the first part of the year packing in the Department of Geology of all material and cases intended for the new building was completed. This included packing of the contents of forty-two exhibition cases remaining installed at the close of last year, a large quantity of material belonging to the study collections, furniture and equipment of the offices and laboratories of the department and some collections and objects that for lack of exhibition space had been stored in the basement. As noted in a previous report, the nature of nearly all the specimens in the exhibition cases made it necessary to remove them from these cases in order to put them in a safe condition for transportation. In some instances after being packed in proper receptacles, the specimens were returned to the cases and the cases used as carriers, but it was found possible to move only three cases and contents without

removal of the specimens. During the period of packing as a whole two hundred and eighty exhibition cases were emptied of their contents and all fittings made fast so that there would be no danger of injury to any part in moving. It is gratifying to report that this work was so carefully and thoroughly done that with the exception of one case which failed owing to faulty construction, no cases or contents suffered any breakage of glass or other marked injury during the moving to the new building and placing in position there.

One of the most difficult specimens to prepare for moving was the skeleton of the large dinosaur. Because of its great weight and fragile nature this could not be transported as a whole. It was therefore necessary to disarticulate the skeleton and handle each bone as a unit. The leg bones and most of the pelvic bones were crated separately without additional reinforcement. The foot bones and the smaller bones of the tail were separated and packed in tight boxes. The ribs required additional strengthening. Each rib was first wound spirally with tough paper to protect its finish. It was then covered with plaster and burlap, as fossils are treated for shipment from the field. In turn each rib was further reinforced by means of iron rods, either bent to conform to the outline or extending across the arc as a chord. The entire series was then crated. The vertebrae were handled singly. Before removing from their position on the frame-work the spines and lateral processes were braced by means of light, iron rods. These braces, extending from each centrum to the lateral processes and thence to the crest of the spine of each vertebra, were attached by the use of plaster. This done, the screws holding each vertebra to the steel frame-work were removed, leaving the immediate support attached to the specimen. The vertebrae were then placed separately on light, wooden frame-works which acted as temporary bases, and were firmly anchored to them in an upright position by means of wires attached to the four corners of the base and drawn tightly through the neural canal. The vertebrae were then placed, two each, in wheeled carriers padded at the bottom to protect from jar. Each vertebra was firmly attached to the bottom of the carrier by means of long screws driven through the temporary base. By the use of all these means the entire skeleton was well protected and was transported to the new building with comparatively little breakage. The steel framework on which the skeleton was installed was unbolted and moved as lengths of structural steel and the wooden base above the frame-work was taken apart and carefully crated for transportation.

The safe transportation of the large fulgurite also presented a somewhat difficult problem. The specimen is an exceedingly irregular hollow

tube about nine feet long and an inch in diameter, with walls of about the thickness and strength of an egg shell. This had been mounted on hangers which held it about six inches from the back of its case. In order to move this specimen with its supporting wooden rod it was placed in a horizontal position in a special packing case. It was then well wrapped with paraffined tissue paper and a thin fin of tow and plaster was built up from an anchorage on the packing case floor to the specimen, supporting it throughout its entire length. At intervals of perhaps a foot, a narrow ring of tow and plaster was also passed around the specimen to connect it securely to the fin. The paraffined tissue not only prevented staining by the plaster but also checked any adhesion of the plaster or dovetailing to any rough portions of the specimen. Protected in this manner the specimen was safely transported to the new building and after unpacking was readily mounted and installed.

Besides the exhibition cases, the departmental material transported to the new building was contained in 226 barrels, 1,086 large boxes and crates and several thousand small boxes and cartons. Packing, transportation and unpacking of this material was accomplished with practically no loss whatever from breakage or other injury, a fact which gives proof of the care with which the packing and handling was done. The large skeleton of the Northern Mammoth presented to the Museum some years ago by Mr. George Manierre and temporarily housed at the Chicago Academy of Sciences through the courtesy of that institution, was also transferred to the new building.

In order to facilitate placing of the exhibition cases in the new building, installation numbers were given to each hall of the portion of the building assigned to the department and to each alcove in each hall. The cases designated for these alcoves were then correspondingly marked, so that on arrival at the new building each case was taken directly to its assigned alcove. Before installation all the glass of all the cases was cleaned, the wood-work of the exteriors was refinished and that of the interiors repainted. Any injuries to the exterior wood-work of the cases that were too deep to be rubbed out, were carefully chiseled out and new wood inserted and the whole refinished in such a manner as to restore the cases to their original appearance. The cases forming the sides of the alcoves were carefully fitted to one another in such a manner as to make the line of joining as narrow and inconspicuous as possible and they were then securely fastened together. A greater rigidity and stability of the cases was thus gained, and a pleasing appearance of the cases as seen from the aisle was produced. The number of cases so joined was 126. Twenty of the flat cases having shown in moving that the method of attachment of the legs was not as secure as was desirable,

these were thoroughly overhauled and stout fastenings provided. Also, from fourteen of the cases in Frederick J. V. Skiff Hall the burlap linings which had become torn and discolored from long usage, were removed and new, freshly dressed linings substituted. Blocks numbering 1,600 used for mounting individual specimens and various other mounts used in this hall were also repainted and the shelves of many of the cases were braced with strong wooden supports so as to guard against possible breakage of the shelves from the weight of specimens. A large number of other supports or fixtures, such as easels, frames, pedestals, etc., used in this and other halls of the department were also repainted.

The space assigned for the exhibition cases of the department in the new building consists of five halls on the second floor of the western section of the building. Four of these halls, 180 ft. by 42 ft., in dimension, have their greatest length in an east and west direction and one, 317 ft. by 48 ft., has a principal north and south range. Of the four halls extending east and west, that on the north side of the building contains the systematic collection of minerals, the meteorite collection and part of a collection illustrating physical geology. The systematic mineral collection occupies the eastern half of the hall. It is installed in 32 cases, 16 of which are of a sloping-top type and 16 of a tall, upright type. The cases are arranged on either side of the hall so as to form alcoves, each alcove except the first being bounded by a tall case on each side and containing a sloping-top case in the center. Each alcove is twelve feet deep and including the side cases, fourteen feet wide. Each is lighted by a pair of windows at one end. The sides of the alcoves are made by the tall cases being placed at right angles to the length of the hall, one end of each resting against a pilaster of the wall between the windows. A broad, middle aisle sixteen feet in width permits free passage through the center of the hall. The mineral collection is arranged in these cases according to the order of Dana's system, a number on the label of each specimen showing the position of the specimen in the system. For the most part, the large specimens are shown in the tall cases at the sides of the alcoves and the smaller specimens in the lower, central cases. The re-installation of this collection was completed during the year, the specimens being for the most part installed in the positions and cases which they had occupied in the old building, but some alterations necessitated by changes of orientation of the cases were made. The total number of specimens now on display in this collection is 4,476. In the re-installation of all the collections of the department, the system of marking described in a previous report, by which the position of each specimen in installation was indicated by a label wrapped with the specimen, proved of great assistance in securing rapid and accurate

placing of the specimens. Following this collection, two cases of a combined upright and flat form are devoted to the William J. Chalmers crystal collection and two similar cases contain collections illustrating varieties of amber and ornamental objects carved from semi-precious stones. Following these, six large oblong cases, three square cases and two narrow, upright cases contain the meteorite collection. In the square cases are placed large, single specimens of the Davis Mts., Long Island and Brenham falls, respectively, while the remaining meteorites which are exhibited are to be disposed on pyramids or shelves in the other cases. The remainder of the hall is devoted to four upright cases arranged in alcove form containing collections of concretions and septaria, and specimens illustrating glacial phenomena, weathering, etc. Two large, glaciated slabs from Kelley Island and Amherst, Ohio, are to be installed on individual bases in opposite alcoves in connection with this series. In the next hall south there have been placed at the east end eight upright cases. These are to contain the collections illustrating various rock structures, such as dikes, veins, cave formations, rock markings, etc. These cases are arranged in alcove form disposed in a manner similar to that already described for the cases containing the systematic mineral collection. A case devoted to large gypsum crystals and one containing a fulgurite nine feet in length are also placed in this hall. Following these, eight sloping-top cases are devoted to the collection of systematic petrology. Each specimen in these cases is mounted on an individual block screwed to a pyramidal screen. The installation of this collection is complete, 872 specimens being now on display. The remainder of this hall extending eastward is to be devoted to the exhibition of the map collection, consisting of about seventy-five relief and other maps, also globes and other geographic material. The maps are to be exhibited on tables which are to be arranged in positions similar to those of the cases which form the alcoves in other halls of the department. The maps have been unpacked and partially placed, but have not yet been finally installed. The following hall south contains collections of an economic character, chiefly of coal, petroleum and other hydrocarbons, and sands, clays and soils. Of these collections, those of the first group will occupy the eastern half of the hall, those of the second group, the western half. The eastern half is installed according to the alcove plan, similar to that adopted in the department as a whole, eighteen upright cases forming nine alcoves. In these alcoves and adjacent to them ten table and other low cases are placed, and in one double-spaced alcove a large case containing an exhibit of coal-tar products. A model of the original Rockefeller oil refinery which,

GRAVITY TRAMWAY FROM UPPER GALLERIES TO MAIN FLOOR, OLD BUILDING.
Lower car conveying twelve-foot exhibition case with installation intact.

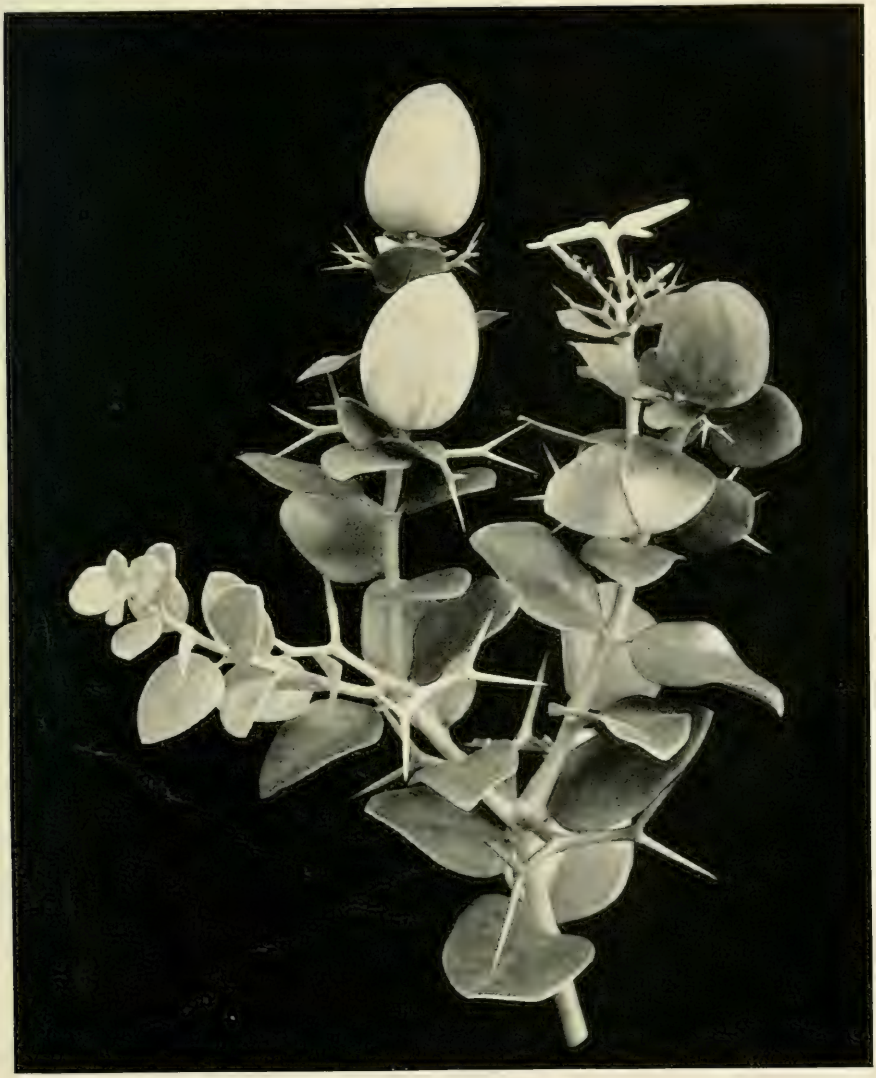
from lack of space has not been shown for some years, will be placed in another alcove. In the sixteen-foot center aisle two table cases four by six feet in size are placed. These contain the diamond and part of the asphalt exhibits. Against the south wall of the hall and adjacent to the passage southward, a large section of an Australian coal seam will be placed. In the western half of the hall the installation is composed chiefly of table cases. As these do not readily lend themselves to a true alcove arrangement, distribution of the cases in a manner consistent with the alcove plan of the rest of the hall has been adopted. The cases are placed in pairs, each pair extending from the windows toward the center of the hall. There is left a twelve-foot center aisle and a narrower passage between the cases of each pair. The arrangement is broken in one place to give space for a diagrammatic collection of clays which requires a linear arrangement of four cases. Beyond this installation of twenty-two table cases at the extreme west of the hall, two square cases containing large specimens have been placed, and bordering the west wall an upright case and a large model of an iron mine. The specimens in the hall as a whole transferred from installation in the old building are to be re-installed in the same cases and with the same arrangement as before. There will also be added, however, many specimens which had been withdrawn from exhibition for several years on account of lack of room. The entire coal collection is one group of such material and substantial additions will also be made to the exhibited collections of clays, sands and soils. The most southerly of the halls of the department has been named Frederick J. V. Skiff Hall. The hall contains the principal economic collections of the department. It includes the ores of the precious and base metals, building stones and marbles and a part of the collection of non-metallic minerals of economic importance. The cases in the hall are arranged according to the alcove plan, broken for a space midway of the hall by the substitution of tall, square cases for the long, upright cases which outline the regular alcoves. These square cases are so disposed, however, that the general alcove effect is retained. A center aisle fourteen and a half feet wide has been left unobstructed through the entire length of the hall. The predominant type of cases used in the installation of the hall is that of those which form the sides of the alcoves. These are materially different in form from those employed in any other hall. They are designed to keep the specimens as near the eye of the spectator as possible even at sacrifice of capacity. They are seven feet high, and at a height of two feet from the floor the exhibition space is extended forward in a horizontal bay which not only keeps the

specimens nearer the eye, but also affords room for larger specimens and those that should be examined from above. The length of the cases is twelve feet, except for six which measure fourteen feet. Each alcove is outlined by two of these cases, one being placed on each side of a window. The cases stand with one end against the wall and extend toward the aisle in the center of the hall. Including the side cases, each alcove is fourteen feet wide, the open space in the center being four feet narrower. On the south side of the hall, the alcoves are twelve feet deep. On the north side they are fourteen feet deep. In the center of each alcove one or two table cases, four by six feet, are placed. Midway of the hall, opposite the passage connecting with the next hall to the north, the character of the alcoves is varied, the principal change being the replacement of some of the long cases by two tall cases, four feet square. These cases are glazed on all sides, except the base, and contain massive specimens and materials of special character. There are twenty-six alcoves in the hall as a whole and they contain forty-two twelve-foot and forty-four other cases. The ores of the heavy metals and the building stone collections are for the most part re-installed in their original cases and in their original positions in the cases. The exigencies of re-installation have compelled some changes, but they are relatively few. The addition of two cases against the east wall has made possible the re-display of a case and a half of ores which had been withdrawn from exhibition for a number of years on account of lack of space. Except for the building stones and alkalies, that part of the non-metallic economic collections which appears in upright cases in this hall has been transferred to cases of a different type from those formerly used. This has made some re-arrangement necessary, owing to the different capacities of the two types of cases, and withdrawal of some of the material has been unavoidable, but for the most part the original arrangement of the specimens has been retained. It was necessary to spend much time and labor in cleaning the specimens of ores. The method employed has been first to remove the dust by use of a vacuum cleaner, then to wash and dry the specimens. As water alone or soap and water was found not to attack a sooty coating which had sometimes formed through exposure to a smoky atmosphere, and as the more corrosive detergents could not be used, some care in selecting a suitable cleansing agent was found imperative. Satisfactory results were, however, secured by use of cold water containing a moderate quantity of carbonate of ammonia. As the collections in this hall are now arranged, there are shown at the east end and extending from the east entrance about half way down the hall, the ores of the precious and base metals. These are arranged in the order of the installation employed in the old building;

first, synoptic collections of gold, silver and lead minerals and ores and secondly, collections of these ores geographically arranged. Platinum ores occupy one table case at the head of the series. The gold, silver and lead collections are followed by ores of the other metals with the specimens geographically arranged under each metal. Interspersed with these ores at convenient points are placed models illustrating methods of mining and of extracting the metals from the ores. The metallurgy of some of the more important metals is also illustrated by specimens. Following the ore collections are placed those of the building stones and marbles. These are shown in the form of polished slabs in upright cases and of four-inch cubes in table cases. To them are added specimens of materials adapted to ornamental uses cut in forms intended to display their fitness for such uses. The western end of the hall is filled with a variety of minerals of economic interest, including mica, asbestos, and abrasive materials, and at the extreme end the alkali collections are placed. The western hall, which is the largest of the exhibition halls of the department, is devoted to the paleontological collections. This hall, as already stated, is 48 feet in width and 317 feet in length. Its size and proportions have enabled a unique installation of the paleontological collections to be made, the most important feature being that it has been possible to place all the collections in the hall in chronological order. Thus an epitome of the history of life upon the earth, beginning with the remains of living forms of the earliest period and passing in order to the life of Recent time is presented to the observer. The characteristic fossils or life forms of any particular period can be seen in whatever portion of the hall corresponds in position to the place of the period in time, or the course and development of life as a whole can be studied. The earlier forms have been placed at the south end of the hall, and from this point the progression in time advances to the north end. Introductory to the series, two cases contain, one a collection illustrating methods of fossilization and the other a collection showing contrasting forms of ancient and modern plants and animals. As in the other halls of the department, the cases in this hall are arranged to form alcoves, the sides of the alcoves being made by upright cases twelve feet in length by eight feet in height and usually two feet in depth. Two of these placed back-to-back with ends resting against the pilasters which separate the windows of the hall form the alcoves. Within these alcoves for the most part, single sloping-top cases designed for specimens which require close inspection are placed. These cases occupy a floor space of four by five feet each, leaving an aisle three feet wide between them and the sides of the alcoves and four feet wide between them and the windows. Occasionally the alcove space is doubled or trebled in

order to permit the placing of large objects. The upright cases as a rule contain large specimens, slab mounts and single skeletons. Altogether twenty-two alcoves of this form have been placed in the hall. A central aisle, twenty-two feet in width, passes through the hall between the alcoves, and this is utilized to some extent for the exhibition of large mounts, such as those of the two dinosaurs Apatosarus and Triceratops, the cast of the Megatherium skeleton and some single cases. The installation of all cases in the hall, numbering sixty-six, has been essentially completed. In general, the specimens were placed in the cases in the same order and positions which they had occupied before removal, but wherever some improvement in sequence or appearance could be made this was carried out. The precaution which had been adopted to secure the safe transportation of some of the more fragile material, such, especially, as wrapping dinosaur and other bones with paper and covering them with burlap and plaster, proved on unpacking to have been very successful, practically no breakage having occurred and the appearance of the specimens not having been injured. This was especially gratifying in the case of the large Triceratops skull, the thin, expanded bones of which were exceedingly fragile. The specimens yet to be installed in this hall are chiefly large and massive ones, such as the great dinosaur, Apatosaurus, the skeletons of the mastodon and mammoth and some large casts. The iron frame-work for the dinosaur has been assembled but the erection of the specimen upon it has not yet been accomplished. The energies of the staff were devoted so largely to installation, that little opportunity was available for work upon the study collections or in the laboratories. The study collection of systematic minerals has, however, been placed in trays, labeled and arranged in order in drawers contiguous to the exhibit series. Work in the laboratories has largely been confined to repairs upon specimens, but in the early part of the year opportunity was found to remove from matrix and prepare for exhibition two large ribs, nine feet in length, of the type specimen of Brachiosaurus. This material, as it came from the field, is in so fragmentary a condition, that the task of preparing it is a difficult and tedious one, but the unique character of the material makes its preservation highly important.

In the Department of Zoölogy, the year was devoted almost exclusively to the work in connection with the removal to the new building. Packing continued until April and was followed by the period of actual moving during which members of the staff, office, and taxidermists' force were assigned to specific tasks in checking the pieces out of the old building and into the new and in giving special care to such material as required it. The entire collections of the department were moved



NATAL PLUM.
(*Carissa grandiflora.*)
A reproduction of a branch of this attractive fruit, introduced into Florida in 1902, for its pleasant cranberry-like fruit and jasmine-scented flowers.

without serious damage. The smaller exhibition cases were transported intact with specimens of light weight *in situ* securely fastened to the shelves or to the floor. Even the extensive osteological exhibits traveled largely in this way, although small skeletons and crania were specially packed in cartons and very large ones were crated. Heavy material, as corals and other fragile invertebrates, was removed from the cases and packed in boxes, cartons, and barrels. Exhibition cases of medium size (more than 4 feet in width) were transported after removal of all or part of the glass and with the specimens covered with a temporary protecting cloth. In this way certain habitat groups, as the hyaenas and warthogs, were handled simply and successfully. Very large cases, including many of the habitat groups, as moose, mountain sheep, koodoo, zebra, etc., required the complete dismantling of the case and the dismemberment of the group, the animals being placed individually on special temporary bases and the ground work and accessories being divided and crated. The African elephants, after removing the head of the one mounted with its trunk elevated, were placed on an open flat-car and came through without mishap. The study collections of mammals and birds packed in original containers offered no difficulty. Fishes and reptiles in glass jars, which were wrapped in corrugated cardboard and packed tightly in cartons, suffered no breakage whatever. Even pinned insects, which were subjected to much vibration, show no injury so far as examined. Since removal to the new building steady progress has been made in the re-installation of the exhibition material. The first hall to be finished was the west colonnade (George M. Pullman Hall) which has been devoted to ungulate mammals, the deer, antelope, sheep, goats, and wild oxen. These are mostly game animals of considerable popular interest and have been arranged to form a unit with allowance for slight expansion in the future. The hall of systematic mammals followed and then that of systematic birds and the habitat groups of birds. A number of groups of African mammals also were completely installed before the end of the year. Over two months were devoted to the re-installation of the shell exhibit. Besides re-installing the shells which were on exhibition in the old building, good progress has also been made on the installation of the four new A-cases that had not been in use heretofore. In order that there should be uniformity in color of all the shell tablets and labels, it was decided to blacken the edges of the yellow shell tablets and to reprint all of the buff-colored labels in the six so-called table cases. Some progress has also been made in the installation of the sponge and coral exhibit. There have now been re-installed and completed twelve A-cases of shells and two standard cases of sponges and corals. Several other cases also are far advanced

toward completion. All of the skeletons have been unpacked and four cases have been installed and two are under way. The large skeletons are being installed on bases in the exhibition halls.

THE N. W. HARRIS PUBLIC SCHOOL EXTENSION OF FIELD MUSEUM OF NATURAL HISTORY. —At the end of the present year there were 677 cases available for circulation among the public schools of Chicago. Of this number, thirty-one were prepared during the year. This is a falling off from the previous annual production of cases for circulation. This decrease in cases prepared is attributed to causes which the department could not avert. The principal causes were the resignation of an assistant taxidermist, and the transfer of a preparator to another department. Another cause was the abandonment for several weeks of practically all productive work for preparations necessary for the removal from the old building to the new one, and the installation there of fixtures for office and work-rooms. The removal of the department to the new building was accomplished largely by the use of the delivery truck, and without the loss of a day in the delivery of cases to schools. Rather than increase the production of cases by sacrificing past standards, the usual care with the details of each was employed. When arranging the schedule for the loaning of cases to schools during the scholastic year of 1920–1921, the latest issue (1919–1920) of the Directory of the Public Schools of the City of Chicago was used. In this directory the names and addresses of 23 high, and 255 main elementary schools were given. In compliance with a formal request made last year that cases be also loaned to high schools, seventeen were included in the present operating loan schedule. For the reason that six of the listed high schools have technical courses, cases are not loaned to them. Cases are loaned to 255 main elementary schools. Because of the great distances to two of the main elementary schools, and of road conditions met with by the motor truck in delivering cases to them, they have been, it is hoped, only temporarily deprived of the uses of the loan cases. In addition to making loans to the 253 main elementary schools, cases are also loaned to 18 branches of elementary schools. Besides the 288 schools, made up of 17 high, 253 main elementary and 18 branch elementary schools, which are scheduled to receive cases, there are other schools to which cases are loaned when requested to do so. These are the practice, continuation and parental schools. Based on information received from the office of the Superintendent of Schools as to the number of pupils attending public schools, it is confidently believed that cases will be loaned during the present scholastic year to schools having a combined enrollment of fully 344,000 pupils. This estimate is com-

posed of 316,000 pupils of elementary and of 28,000 of high schools. In response to a formal request made by the Boys' Work Secretary of the Young Men's Christian Association for the loan of cases to that association's summer school, at 1621 Division Street, several cases were sent. That these cases proved to be of educational value and interest is evident, for, from the same source there came a subsequent request for cases, but in this instance it was asked that cases be loaned periodically throughout the year. This request is being complied with, and in doing so care has been and will be taken to prevent any interference with service to the public schools. The Supervisor of the Children's Department of the Chicago Public Library requested the loan of six cases of birds for the purpose of exhibiting them for a short time at the Public Library, to stimulate interest in books on birds. The cases were loaned, and it was reported that they rendered the service for which they were solicited. This year, as has been done during the past two years, twenty-four cases were on exhibition in the Art Gallery of the Municipal Pier during the months of July and August.

Mrs. Charles L. Hutchinson, President, Chicago Chapter, Wild Flower Preservation Society of America, asked that four cases be displayed at the annual exhibition held under the auspices of that society, at the Art Institute from the 6th to the 22nd of January 1920. This request was granted, as was a subsequent one for six cases for the same purpose, and at the same place from December 18th 1920 to January 18th 1921. In connection with a request for the temporary use of several cases for the purpose of rendering service in establishing a system of loaning cases to schools in St. Paul, Minnesota, the curator of the museum of Saint Paul Institute in that city wrote:—"While visiting the Field Museum some time ago, I was greatly impressed with the educational value of your school cases. The fact that they can be circulated through the various schools from time to time gives them added value." It is regretted that this request could not, at that time, be granted. The President of the San Diego Society of Natural History stated in a communication that a considerable donation had been made to that society for the purpose of popularizing natural history, especially in the schools of San Diego and, having seen this department's exhibit at the Panama-Pacific Exposition, he would like to have such data as would assist in establishing a similar system. It has since been learned that the museum of this society will build a number of small cases for containing birds, minerals, plants, etc., to loan to schools, as part of its educational work. Having in view the prospect of the U. S. Department of Agriculture aiding rural communities on subjects pertaining to agriculture, Professor Frank Lamson-Scribner, Special Agent and

Agrostologist of that department, and two of his departmental associates, conducted a careful examination of a great many loan cases, and made many inquiries as to methods employed in loaning and in recording them.

After having made a most careful inspection of many cases of natural history subjects, Doctor Paul Bartsch, Curator, Division of Marine Invertebrates, U. S. National Museum, stated in a communication to this department: "I wish there might be some way to actually determine the amount of good enterprises of this kind bring about. To me it seems the very foundation of things. I am sure that the citizens of Chicago will show much greater interest in outdoor studies, and a much closer touch with nature, than other citizens where such work is not undertaken. These youngsters do grow up so quickly, and it will only be a little while until the children that have had the benefit of your efforts will become parents who will rejoice with the little ones for the opportunity you give them . . ."

PHOTOGRAPHY AND ILLUSTRATION.—A large part of the year was spent by this section in packing negatives, lantern slides and photographic apparatus for transportation to the new building and in unpacking and arranging negatives and lantern slides after the removal so as to be readily accessible when required. The following is a tabulation of the work performed in this section:

	Number of Negatives Made	Number of Prints Made
General	212	6
Anthropology	6	56
Zoology		115
Totals	218	177

Total number of Catalogue entries during year 1920	395
Total number of Catalogue entries to December 31, 1920	121,239
Total number of Record Books	20

PRINTING.—The number of labels and other impressions made by the Section of Printing is as follows:

	Exhibition Labels	Other Impressions
Anthropology	7,659	975
Botany	192	2,200
Geology	970	500
Zoology	376	500
Library	....	1,500
Harris Extension	94	500
General	...	15,010

Herewith are also submitted balance sheet, lists of accessions, names of members, etc., etc. FREDERICK J. V. SKIFF, Director.

SET OF JAPANESE DOLLS.

Presented by Mr. and Mrs. Edwin F. Gillette. Installed in center of Hall 32 (West Gallery, Second Floor).

ATTENDANCE FROM JANUARY 1, 1920, TO FEBRUARY 23, 1920.

ATTENDANCE

Paid Attendance:		
Adults	443	
Children	24	467
Free Admission on Pay Days		
School Children	93	
Students	100	
Teachers	22	
Members	4	
Officers' Families	2	
Press	3	
Special	9	
Free admissions for one week following the discontinuance of admission charges	119	352
		819
Admissions on Free Days:		
Saturdays		575
Sundays		2,351
Total Attendance		3,745

BALANCE SHEET

December 31, 1920.

ASSETS

SPECIAL FUNDS

Marshall Field Bequest Endowment Fund:		
Real Estate	$3,200,000.00	
Investments	588,469.78	
Loss from Sale of Investments	26,430.22	
Cash	100.00	$3,815,000.00
Sinking Fund:		
Investments	$ 47,290.00	
Cash	54.89	47,344.89
Marshall Field Bequest Building Fund:		
Investments	$ 282,456.11	
Loss from Sale of Investments	155,777.37	
Cash	21,350.88	
	$ 459,584.36	
Paid for New Building construction	6,143,806.54	6,603,390.90
The James Simpson Theatre Fund:		
Cost of construction and equipment to date		86,157.31
Stanley Field Museum Employes' Pension Fund:		
Investments	$ 176,550.00	
Cash	708.69	177,258.69
Mrs. Stanley Field Plant Reproduction Fund—Provisional:		
Investments	$ 143,770.00	
Loss on sale of investments	7,503.00	
Cash	496.39	151,769.39
Edward E. Ayer Library Fund:		
Investments		50,000.00
Life Memberships Fund:		
Investments	$ 89,340.00	
Cash	507.64	89,847.64
Huntington W. Jackson Library Fund:		
Investments	$ 1,821.50	
Cash	27.08	1,848.58

(Continued on page 406.

BALANCE SHEET

December 31, 1920.

LIABILITIES.

SPECIAL FUNDS

Marshall Field Bequest Endowment Fund . .			$3,815,000.00
Sinking Fund:			
Amount of Accumulated Fund to December 31, 1920		$ 41,061.82	
Income from Investments		6,283.07	47,344.89
Marshall Field Bequest Building Fund:			
Amount of Bequest		$4,000,000.00	
Income from Investments		2,256,891.11	
U. S. Government Refund—account Hospitalization		87,215.16	
New Building Salvage		7,311.86	
Building Sinking Fund—Income		5,635.66	
Advances by Woman's Temple Realization Fund		146,181.69	
Accrued Interest		155.42	
Deficit Fund:			
Contribution by Mr. Stanley Field		100,000.00	6,603,390.90
The James Simpson Theatre Fund:			
Amount of Contribution to date		$ 36,339.00	
Advances by Woman's Temple Realization Fund		49,818.31	86,157.31
Stanley Field Museum Employes' Pension Fund:			
Contribution by Mr. Stanley Field		$ 150,000.00	
Income transferred to Pension Fund . . .		25,000.00	
		$ 175,000.00	
Balance of Income from Investments for 1920	$5,891.30		
Less Group Insurance Premiums and Pensions	3,904.90	1,986.40	
Accrued Interest		272.29	177,258.69
Mrs. Stanley Field Plant Reproduction Fund:			
Amount of Provisional Deposit .		$ 150,000.00	
Net Income—1920	$9,412.39		
Less Operating Costs for 1920 .	7,643.00	1,769.39	151,769.39

(Continued on page 407.

New Building Moving and Furnishing Fund:		
Moving costs paid to date	$ 63,936.26	
New Furniture	3,068.27	
Investments	39,000.00	
Cash	7,325.95	113,330.48
Illinois Central Foot-bridge Fund:		
Cost of Foot-bridge		17,175.48
Illinois Trust & Savings Bank stock—Liquidation Fund:		
Cash		1,436.00
Sundry Funds:		
Investments	$ 12,150.00	
Cash	822.68	12,972.68
GENERAL FUND		
Investments	$ 120,024.67	
Investments—in suspense	3,980.00	
In Suspense:		
Cost of Fire Pump	8,864.11	
United States Victory Loan Bonds 4¾% Purchased for account of employes	474.60	133,343.38
Collections—cash purchases only	$ 733,790.88	
The Library—books, pamphlets and binding	47,366.43	781,157.31
Woman's Temple Realization Fund:		
Investments	$ 298,045.50	
In suspense	129,612.61	
Advances to other funds:		
Building Fund	146,181.69	
James Simpson Theatre Fund	49,818.31	
Illinois Central Foot-bridge Fund	17,175.48	
Accrued interest	427.71	
Cash	17.67	641,278.97
Cases, bases, office furniture, etc.	$ 348,104.42	
Printing presses and type	2,876.20	
Photographic equipment	3,804.83	354,785.45
Cash:		
General Fund in Treasurer's hands	$ 6,094.85	
Payroll Fund in Treasurer's hands	2,000.00	
Petty Cash in office	739.95	
In Suspense (Foreign Exchange)	735.00	9,569.80
		$13,087,666.95

Edward E. Ayer Library Fund:		
Amount of Bequest		50,000.00
Life Memberships Fund:		
Amount of Fees paid	$ 79,600.00	
Income from Investments	10,247.64	89,847.64
Huntington W. Jackson Library Fund:		
Amount of Bequest	$ 971.50	
Income from Investments	877.08	1,848.58
New Building Moving and Furnishing Fund:		
Amount of Fund at December 31, 1920 . .	$ 99,925.69	
Income from Investments	13,404.79	113,330.48
Illinois Central Foot-bridge Fund:		
Advances by Woman's Temple Realization Fund		17,175.48
Illinois Trust & Savings Bank Stock—Liquidation Fund:		
Interest Received		1,436.00
Sundry Funds:		
Amount of Sundry Funds at December 31, 1920		12,972.68
CAPITAL		
Balance as at January 1, 1920	$1,793,955.71	
Less Deductions (Authorized)	20,742.57	
	$1,773,213.14	
Addition to Capital during 1920	126,350.54	
Net Income for year 1920—General Fund . .	9,199.44	
Woman's Temple Realization Fund—Income Accrued	11,371.79	1,920,134.91
		$13,087,666.95

STATEMENT OF INCOME AND EXPENSES.

General Income Account Year Ending December 31, 1920.

INCOME

Admissions and Check Rooms		$ 135.70
Dues of Annual Members		590.00
South Park Commissioners		11,250.00
Sundry Receipts		141.31
Dividends and Interest Collected—General Fund		11,300.84
Woman's Temple Realization Fund—Income		15,135.00
Endowment Fund—Income	$137,154.00	
Less amount transferred to Sinking Fund for 1920	5,500.00	131,654.00
		$170,206.85
Contribution—Marshall Field		19,755.32
Gross Income		$189,962.17

EXPENSES

Salaries	$ 82,690.60	
Guard and Janitor Service	26,670.70	
Fire Protection Service	3,199.79	
Heat and Light	26,581.99	
Packing Supplies	1,736.61	
Maintenance Force and Supplies	21,933.95	
General Expense	5,630.48	
Department Installation Supplies	2,730.23	
Printing and Photography Supplies	1,696.32	
Publications	7,892.06	180,762.73
Net Income for Year carried to Capital Account		$ 9,199.44

THE N. W. HARRIS PUBLIC SCHOOL EXTENSION.

BALANCE SHEET
December 31, 1920.

ASSETS

Cases and Furniture		$ 6,560.58	
Collections and Exhibits		1,195.72	
Investments—Endowment Fund		275,000.00	
Investments—Reserve Fund		29,080.00	
Cash:			
Endowment Fund	$748.47		
Reserve Fund	262.95		
Petty Cash	250.00	1,261.42	$313,097.72

LIABILITIES

Endowment Fund		$275,000.00
Reserve Fund:		
Balance December 31, 1919	$ 8,120.78	
Income for the year 1920	1,209.67	
Amount transferred from Income Account	3,663.74	12,994.19
Surplus:		
Balance December 31, 1920		25,103.53
		$313,097.72

STATEMENT OF INCOME AND EXPENSES FOR YEAR 1920.

INCOME

Interest and Dividends on Investments	$13,434.48	
Interest on Bank Balances	71.70	$13,506.18

EXPENSES

Group Accessories	$ 20.39	
Field Work	44.08	
Expense of Distribution of Cases to Public Schools	2,018.12	
Salaries and Expenses	7,176.10	9,258.69
Gross Income		$ 4,247.49
Deduction from Income (Depreciation of Automobile Delivery Car)		583.75
Balance transferred to Reserve Fund		$ 3,663.74

CERTIFICATES OF AUDIT

January 12, 1921.

We have audited the accounts and records of Field Museum of Natural History for the year ending December 31, 1920, and certify that the foregoing Balance Sheet and Income Account for the year are in accordance therewith.

All the income from investments has been accounted for. The securities representing the invested portions of the various funds were verified by us and also the uninvested cash balances of the respective funds and petty cash funds.

All disbursements for the year have been examined and found to be supported by properly authorized vouchers and warrants.

ARTHUR YOUNG & COMPANY

Certified Public Accountants.

January 12, 1921.

We have audited the books of the N. W. Harris Public School Extension of Field Museum for the year ending December 31, 1920, and certify that the foregoing Balance Sheet and Income Account for the year are in accordance therewith.

The investment securities have been verified by us. All income from these securities has been accounted for. The cash in bank and on hand at December 31, 1920, has been verified by us.

We have examined all disbursements for the year and found them evidenced by duly authorized vouchers and warrants.

ARTHUR YOUNG & COMPANY

Certified Public Accountants.

ACCESSIONS.

DEPARTMENT OF ANTHROPOLOGY.

AYER, E. E., Chicago, Illinois.
1 Moro kris in wooden sheath—Philippine Islands (gift).
1 Pima basket with black designs—California (gift).
1 steatite kettle, 1 ivory snow-knife, 1 Eskimo ivory tobacco-pipe, 1 modern oil dish, 2 Tlingit rattles—Eskimo and Tlingit, Alaska (gift).
1 Pomo feather head-band—California (gift).

BIGGAR, H. HOWARD, Bureau of Plant Industry, United States Department of Agriculture, Bloomington, Illinois.
13 varieties of maize-cobs cultivated by American Indians (gift).

CROFTS, GEORGE, Tientsin, China.
2 clay statuettes of the T'ang period—China (gift).

ELLIOTT, MRS.
17 miscellaneous baskets and 1 coconut shell in net—Northwest Coast, California, Arizona, India, etc. (gift).

ENGLISH, EVELYN, Chicago, Illinois.
1 Navaho saddle-blanket obtained from Ute tribe (gift).
1 piece of Rio Grande Pueblo painted pottery—Santa Fe, New Mexico (gift).
1 piece of Rio Grande Pueblo black pottery—Santa Clara, New Mexico (gift).

GILLETTE, MR. and MRS. EDWIN F., Chicago, Illinois.
1 set of nine ancient dolls representing emperor and empress of Japan, surrounded by guards and orchestra of five musicians, all dressed in brocade, with painted screen as background—Tokyo, Japan (gift).

HARPER, MRS. PAUL V., Chicago, Illinois.
Collected by Bishop Vincent:
2 Chimu pottery vases—North Coast, Peru (gift).

HEYE, GEORGE G., New York City.
239 specimens of archæological material, chiefly of shell and bone—San Nicholas and San Miguel islands, California (gift).

HUDSON, DR. J. W., Ukiah, California.
1 polished stone hatchet—Port Discovery, Washington (gift).

McCAULEY, MRS. CHARLES A. H., Highland Park, Illinois.
1 Sioux peace-pipe—Dakota (gift).

MELCHIOR, J. E., Hankow, China.
2 Chinese pottery jars—China (gift).

RISDON, MRS. AMBROSE, Chicago, Illinois.
1 Japanese dagger (gift).
1 dagger and 1 bridle from Palestine (gift).
1 clay lamp from Ephesus (gift).
1 statuette and 1 necklace from Egypt (gift).
2 glass-bead necklaces from Cairo (gift).
4 fragmentary pieces of pottery—Mexico (gift).

UNIVERSITY OF ILLINOIS LIBRARY

SARGENT, HOMER E., Pasadena, California.
342 Indian baskets—California and British Columbia (gift).
SKIFF, DR. F. J. V., Chicago, Illinois.
2 prehistoric flint arrowheads—Rosiclare, Illinois (gift).
THOMAS, CHARLES B., Chicago, Illinois.
1 large celt of basaltic rock—Glenwood, Illinois (gift).
TISSERA, VINCENT L. (deceased), from W. N. GREEN, Chicago, Illinois.
1 silver jewel casket—Ceylon (gift).
WRIGLEY, WILLIAM J., JR. (from George G. Heye), Chicago, Illinois.
600 (approximately) archæological specimens, chiefly implements of steatite and other stone, bone, shell and clay—Catalina Island, California (gift).

DEPARTMENT OF BOTANY.

AMES, OAKES, Bussey Institute, Boston, Massachusetts.,
57 herbarium specimens of orchids—North Borneo (exchange).
BAILY, ALBERT L., Chicago.
3 herbarium specimens—Illinois (gift).
CHAMBERLAIN, CHARLES J., Chicago.
1 herbarium specimen—University of Chicago greenhouse (gift).
FIELD MUSEUM OF NATURAL HISTORY.
Collated by C. F. Millspaugh:
91 herbarium specimens.
Purchases:
7 economic specimens—LaJolla, California.
1 Lycopodium powder from drug store.
1 economic specimen—Ceylon.
400 herbarium specimens—Bolivia.
Mrs. Stanley Field Plant Reproduction Laboratory:
11 herbarium specimens—various localities.
1 reproduction of enlarged flowers of Cocos nucifera.
8 reproductions of Algae.
11 plant reproductions: cotton flower enlarged, cotton plant in flower and fruit, Strychnos, enlarged flower, Zamia, enlarged flower and fruit, Ulothrix, Alga (4 micro. enlarged), Mango: "Mulgoba" fruit, "Haden" fruit, "Amiri" fruit.
FISHER, GEORGE L., Houston, Texas.
6 herbarium specimens—Santa Catalina Island, California (gift).
GRAY HERBARIUM, Harvard University, Cambridge, Massachusetts.
3 herbarium specimens—various localities (exchange).
MINER LABORATORIES, Chicago.
1 economic specimen of Mucherus gum (gift).
MOXLEY, GEORGE L., Los Angeles, California.
5 herbarium specimens—Santa Catalina Island, California (gift).
12 herbarium specimens—California (gift).
NEW YORK BOTANICAL GARDEN, Bronx Park, New York City.
33 herbarium specimens (exchange).
146 herbarium specimens (exchange).
Herbarium specimens—United States of Colombia (exchange).
PANCOAST, THOMAS B., Miami Beach Development Co., Miami, Florida.
1 cocoanut palm—Miami, Florida.

SULTAN DRUG COMPANY, St. Louis, Missouri.
1 economic specimen of Cactina pillets—Mexico (gift).
UNITED STATES NATIONAL HERBARIUM, Smithsonian Institution, Washington, D. C.
Herbarium specimens (exchange).
610 herbarium specimens (exchange).
518 herbarium specimens—Jamaica (exchange).
UNIVERSITY OF CALIFORNIA HERBARIUM, Berkeley, California.
6 herbarium specimens—Santa Catalina Island (exchange).
WILCOXSON, MRS. E. M., Chicago.
95 herbarium specimens—Massachusetts (gift).

DEPARTMENT OF GEOLOGY.

ARNOLD, DR. L. H., Chicago.
1 specimen of gypsum geode—Colorado Springs, Colorado (gift).
AUMAN, JOHN P., Chicago.
2 specimens of crude and nodulized blast furnace flue dust—South Chicago (gift).
BASTIANI, D., Chicago.
2 specimens of tufa—Tuscany, Italy (gift).
CHALMERS, W. J., Chicago.
1 album of photographs of diamond mining—Kimberley, South Africa (gift).
1 specimen of crystallized quartz after spodumene—Greenwood, Maine (gift).
CHAIRMONT, DR. A. DE, Toledo, Ohio.
9 specimens of Holbrook meteorite—Holbrook, Arizona (gift).
COOPER, A. T., Webster, South Dakota.
7 specimens of free gold in silicified andesite, 1 specimen of tetrahedrite—Mills Mine, near Carbo, Sonora, Mexico (gift).
FIELD MUSEUM OF NATURAL HISTORY.
Collected by H. W. Nichols:
1 specimen of concretion, 1 specimen of ore—Schumacher, Ontario.
Purchases:
1 specimen section of Yenberrie meteorite—Yenberrie, North Australia.
GUNSAULUS, HELEN C., Chicago.
1 specimen of weather banded limestone—Lakeside, Michigan (gift).
NEW CORNELIA COPPER COMPANY, Ajo, Arizona.
11 specimens of copper ores—Ajo, Arizona (gift).
PHILLIPS COMPANY, W. S., Chicago.
1 specimen of oil shale—Parachute Creek, Colorado (gift).
1 specimen of bituminous limestone—Blue Island, Illinois (gift).
ROMANO, JOSPEH, Chicago.
1 specimen of pyrite—Jackson Park, Chicago (gift).
SKIFF, DR. FREDERICK J. V., Chicago.
277 specimens of ores and minerals—various localities (gift).
UNITED STATES NATIONAL MUSEUM, Washington, D. C.
1 cast of Yenberrie meteorite—Yenberrie, North Australia (gift).
UNITED VERDE COPPER COMPANY, Clarkdale, Arizona.
6 specimens of copper ores—Clarkdale, Arizona (gift).
6 specimens of copper ores—United Verde Mine, Jerome, Arizona (gift).

UNITED VERDE EXTENSION MINING COMPANY, Jerome, Arizona.
4 specimens of copper ores—Jerome, Arizona (gift).
UNIVERSITY OF CHICAGO, Chicago.
1 specimen of prepared skull of Diceratherium, 1 specimen dentition of Diceratherium—Agate, Nebraska (exchange).
1 skeleton of Varanosaurus—Texas (exchange).

DEPARTMENT OF ZOÖLOGY.

ABBEY, E. S., Chicago.
1 roach—Chicago (gift).
ARMSTRONG, EDWARD E., Chicago.
1 fly—Chicago (gift).
BAILEY, BERNARD, Elk River, Minnesota.
1 marmot, 1 pocket mouse, 6 bats (exchange).
BRANDLER, CHARLES, Chicago.
1 roach—Grant Park, Chicago (gift).
CONOVER, H. B., Chicago.
1 moose (skull and scalp), 2 caribou (skulls and scalps)—Yukon Territory (gift).
CORY, CHARLES B., Chicago.
1 free-tailed bat—Marshalltown, Iowa (gift).
FIELD MUSEUM OF NATURAL HISTORY.
Collected by W. H. Osgood:
1 grasshopper—Rio Cogollo (Perija), Venezuela.
Collected by W. H. Osgood and H. B. Conover:
408 mammals, 225 birds, 29 birds' eggs, 13 fishes, 1 frog—Venezuela.
LILJEBLAD, E., Chicago.
1 moth (and gall)—Mineral Springs, Indiana (gift).
1 moth—Chicago (gift).
NARBO, DR. S., Chicago.
20 birds' eggs—Stavanger, Norway (gift).
NEWBURY, MRS. MOLLIE NETCHER, Boston Store, Chicago.
1 mounted giraffe (gift).
OCHSNER, E. D., Prairie du Sac, Wisconsin.
1 least weasel (gift).
RYERSON, MARTIN A., and C. B. PIKE, Chicago.
1 albino striped gopher—Lake Geneva, Wisconsin (gift).
SONSHINE, MISS B., Chicago.
8,886 shells, 20 sea urchins, 14 starfish, 12 sand-dollars, 3 barnacles—California (gift).
VERES, GILBERT L., Lucena, Tayabas, Philippine Islands.
54 land shells—Philippine Islands (gift).
VIOSCA, PERCY, New Orleans, Louisiana.
270 specimens of salt and freshwater fishes—Southern Louisiana (exchange).
WILL, MISS JUANITA, Chicago.
1 jay (gift).
WILLIAMSON, E. B., Bluffton, Indiana.
1 paroquet—Western Venezuela (gift).

RESTORATION OF GIANT EXTINCT BIRD (MOA) FROM NEW ZEALAND.
Height, 13 feet.

State Museum

SECTION OF PHOTOGRAPHY.

FIELD MUSEUM OF NATURAL HISTORY.

Made by Section:

218 negatives, most of them made during moving period.

177 prints.

THE LIBRARY.

BOOKS, PAMPHLETS, AND SERIALS.

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AFRICA

Durban Museum	1
East Africa and Uganda Natural History Society, Nairobi	1
Geological Society, Johannesburg	1
Institut d'Egypte, Cairo	4
Institut de Carthage, Tunis	1
Rhodesia Scientific Association, Bulawayo	1
Royal Society of South Africa, Cape Town	1
South African Association for Advancement of Science, Cape Town	1
South African Botanical Survey, Pretoria	1
South African Department of Agriculture, Pretoria	2
South African Museum, Cape Town	3

ARGENTINA

Ministerio de Obras Publicas de la Provincia. Dirección de las Obras de Ameghino, La Plata	2
Museo de La Plata, Buenos Aires	5
Sociedad Ornitologica del Plata, Buenos Aires	1

AUSTRALIA

Australian Museum, Sydney	4
Australian Ornithologists' Union, Melbourne	1
Botanic Gardens and Government Domains, Sydney	1
Commonwealth of Australia, Adelaide	1
Department of Agriculture, Adelaide	1
Department of Agriculture, Sydney	1
Department of Agriculture, Wellington	1
Department of Mines, Sydney	2
Field Naturalists' Club, Melbourne	2
Fish Commission of New South Wales, Sydney	1
Forestry Commission, Sydney (gift)	2
Government of the Commonwealth, Melbourne	1
Institute of Science and Industry, Sydney	1
Linnean Society of New South Wales, Sydney	2
Melbourne University	1
National Herbarium, Melbourne	1
Public Library, Museum and Art Gallery, Adelaide	1
Public Library, Museums and National Gallery of Victoria, Melbourne	1
Queensland Museum, Brisbane	1
Queensland Royal Society, Brisbane	1
Royal Australasian Ornithologists' Union, Melbourne	1
Royal Society of New South Wales, Sydney	1

Royal Society of South Australia, Adelaide	2
Royal Society of Tasmania, Hobart	4
Royal Society of Victoria, Melbourne	2
Royal Society of Western Australia, Perth	1
Royal Zoölogical Society, Sydney	1
South Australia Ornithological Society, Adelaide	1
Technological Museum of New South Wales, Sydney	1
Victoria Department of Agriculture, Melbourne	2
Western Australia Geological Survey, Perth	5
BELGIUM	
Académie Royale de Belgique, Brussels	3
Institut Botanique Leo Errera, Brussels	1
Jardin Botanique de l'Etat, Brussels	1
Musée du Congo, Brussels	1
Musée Royale d'Histoire Naturelle, Brussels	1
Société Royale d'Archéologie, Brussels	2
BRAZIL	
Bibliotheca Nacional, Rio de Janeiro	1
Instituto Agronomico de Estado, Sao Paulo	1
Ministerio de Agricultura, Industria e Commercio, Rio de Janeiro	1
Museo Goeldi de Historia e Ethnographia, Para	1
Servico Geologico e Mineralogico, Rio de Janeiro	1
CANADA	
Chief Game Guardian of Saskatchewan, Regina	1
Commission of Conservation, Ottawa	10
Department of Agriculture, Ottawa	9
Department of Agriculture, Victoria	1
Department of Marine and Fisheries, Ottawa	1
Department of Mines, Ottawa	5
Department of the Interior, Geological Survey, Ottawa	4
Entomological Society of Ontario, Toronto	2
Hamilton Association	1
Horticultural Societies of Ontario, Toronto	1
Nova Scotian Institute of Science, Halifax	1
Ontario Minister of Education, Toronto	1
Provincial Museum, Victoria	1
Royal Canadian Institute, Toronto	1
Royal Society of Canada, Ottawa	1
Société de Géographie, Quebec	1
CEYLON	
Colombo Museum	1
Royal Botanic Garden, Peradeniya	1
CHILE	
Biblioteca Nacional, Santiago de Chile	4
Museo de Etnologia y Antropologia de Chile, Santiago de Chile	1
CHINA	
Botany and Forestry Department, Hong-Kong	1
Canton Christian College (gift)	1
Royal Asiatic Society of North China, Shanghai	1

DENMARK

Botanical Garden, Library, Copenhagen 1
Danske Kunstindustrimuseum, Copenhagen 1
K. Bibliothek, Copenhagen 1
Naturhistorisk Forening, Copenhagen 3
Societas pro Fauna et Flora Fennica, Helsingfors 5
Société Botanique, Copenhagen 1

ECUADOR

Sociedad Ecuatoriana de Estudios Historicos Americanos, Quito . . . 2

FEDERATED MALAY STATES

Federated Malay States Museum, Kuala Lumpur 7

FRANCE

Académie des Sciences, Paris 2
Ecole d'Anthropologie, Paris 2
Musée d'Histoire Naturelle, Marseille 1
Muséum National d'Histoire Naturelle, Paris 2
LaNature, Paris 2
Société d'Etudes Scientifiques, Angers 1
Société d'Histoire Naturelle, Colmar 2
Société d'Horticulture, Paris 1
Société de Géographie, Paris 2
Société de Géographie, Toulouse 1
Société des Américanistes, Paris 1
Société Nationale d'Agriculture, Sciences et Arts, Angers 1
Université de Montpellier, Cette 1
Université de Rennes 7

GERMANY

Deutsche Dendrologische Gesellschaft, Bonn-Poppelsdorf 5
Geographische Gesellschaft in Hamburg 3
K. Sammlungen für Kunst und Wissenschaften, Dresden 4
Naturforschende Gesellschaft, Freiburg 1
Naturwissenschaftlicher Verein für Schleswig-Holstein, Kiel 1
Naturwissenschaftlicher Verein für Schwaben und Neuburg, Augsburg . . 1
Senckenbergische Naturforschende Gesellschaft, Frankfurt. a. M. . . . 5

GREAT BRITAIN

Ashmolean Natural History Society of Oxfordshire, Oxford 1
Birmingham Natural History and Philosophical Society 14
Bristol Museum and Gallery 1
British Museum (Natural History), London 13
Cambridge Philosophical Society 2
Cambridge University Library 1
Dove Marine Laboratory, Cullercoats 2
Dumfriesshire and Galloway Natural History and Antiquarian Society, Dumfries 1
Fisheries Board, Edinburgh 2
Geographical Society, London 2
Geological Society, Edinburgh 1
Great Britain Geological Survey, London 1
Imperial Bureau of Entomology, London 2
Imperial College of Science and Technology, London 1

Lancashire Sea Fisheries Laboratories, Liverpool	2
Liverpool Biological Society	1
Manchester Geographical Society	1
Manchester Museum	1
Marine Biological Association, Plymouth	1
National Museum, Cardiff	1
Natural History Society, Glasgow	1
Oxford University Museum	3
Royal Botanic Gardens, Edinburgh	1
Royal Botanic Gardens, Kew	1
Royal Dublin Society	1
Royal Horticultural Society	1
Royal Scottish Museum, Edinburgh	1
Royal Society, London	1
Royal Society of Arts, London	1
Royal Society of Edinburgh	2
South London Entomological and Natural History Society	1
Tring Zoological Museum	1
Zoological Society of London	3
HUNGARY	
Magyar Ornithologai Központ, Budapest	1
Museum Nationale Hungaricum, Budapest	1
INDIA	
Agri-Horticultural Society, Madras	4
Anthropological Society, Bombay	1
Archæological Survey, Allahabad	1
Archæological Survey, Burma	1
Archæological Survey, Calcutta	1
Archæological Survey, Eastern Circle, Patna	1
Archæological Survey, Frontier Circle, Peshawar	1
Botanical Survey, Calcutta	1
Department of Agriculture, Bombay	1
Department of Agriculture, Madras	1
Department of Agriculture, Pusa	1
Geological Survey, Calcutta	2
Government, Calcutta	2
Government Museum, Madras	5
Indian Museum, Calcutta	3
Jammer and Kashmir Archæological Survey, Jammer	1
Jnan-Bhandar Museum, Dayal Bagh	1
Journal of Indian Botany	1
National Indian Association, Calcutta (gift)	1
Trigonometrical Survey, Dehra Dun	2
IRELAND	
Natural History and Philosophical Society, Belfast	1
ITALY	
Accademia delle Scienze Fisiche e Matematiche, Naples	4
Accademia Giornia de Scienze Naturali, Catania	3
American Academy in Rome	1
Instituto Geografico de Agostini, Novara	1

Laboratorio de Zoologia Generale e Agraria, Portici 1
Musei de Zoologia ed Anatomia Comparata, Turin 4
Museo Civico di Storia Naturale, Genoa 1
R. Accademia delle Scienze, Turin 3
Società Geologica, Rome 1
Società Italiana d'Antropologia e Etnologia, Florence 2
Società Italiana de Scienze Naturali, Milan 2
Società Romana di Antropologia, Rome 1
Società Toscana di Scienze Naturali, Pisa 1

JAPAN

Akita Mining College 1
Bureau of Productive Industry Formosa Government, Taihoku 1
Geological Society, Tokyo 1
Imperial University of Tokyo, College of Agriculture 2
Imperial University of Tokyo, College of Science 2
Tokyo Botanical Society 2

JAVA

Bataviaasch Genootschap van Kunsten en Wetenschappen, Batavia . . 4
Department of Agriculture, Buitenzorg 5
Encyclopaedisch Bureau, Weltevreden 2
Jardin Botanique, Buitenzorg 1
K. Natuurkundige Vereeniging in Nederlandsch-Indie, Weltvreden . . . 1

KOREA

Government-General Chosen, Seoul 1

MEXICO

Director General de Estadistica, Mexico 1
Instituto Geologico, Mexico 1
Sociedad Cientifica "Antonio Alzate," Mexico 1
Sociedad Geologica, Mexico 1
Sociedad Mexicana de Geografia y Estadistica, Mexico 1

NETHERLANDS

Bataafsch Genootschap der Proefondervindelijke Wijsbegeerte, Rotterdam 1
K. Akademie van Wetenschappen, Amsterdam 2
K. Bibliotheek, The Hague 1
K. Instituut voor de Taal-Land-en Volkenkunde van Nederlandsch Indie, The Hague 1
K. Nederlandsch Aardijkundig Genootschap, Amsterdam 1
Nederlandsche Dierkundige Vereeniging, Leiden 2
Rijks Ethnographisch Museum, Leiden 1
Rijks Geologisch-Mineralogisch Museum, Leiden 1
Rijks Museum van Natuurlijke Historie, Leiden 1
Stadtsbibliotheek, Haarlem 1
Universiteit van Amsterdam 3

NEW ZEALAND

Acclimatisation Society, Wellington 1
Auckland Institute and Museum, Wellington 1
Department of Agriculture, Wellington 1
Department of Mines, Wellington 3
New Zealand Institute, Wellington 3

NORWAY

Bergen Museum	5
Norges Geologiske Undersøgelse, Christiania	16
Physiographiske Forening, Christiania	1
Tromsø Museum	8

PERU

Archivio Nacional	1
Biblioteca Nacional, Lima	1
Cuerpo de Ingenieros de Minas, Lima	1
Instituto Historico, Lima	1

PORTUGAL

Academia das Sciencias de Lisboa	1
Biblioteca Nacional, Lisbon	1
Sociedade de Lisboa	1
Société Portugaise des Sciences Naturelles, Lisbon	2

SPAIN

Broteria, Salamanca	1
Institució Catalana d'Historia Natural, Barcelona	1
Junta de Ciencies Naturals, Barcelona	5
Museo Nacional de Ciencias Naturales, Madrid	3
R. Academia de Ciencias y Artes, Barcelona	1
R. Academia de Ciencias Exactas, Físicas y Naturales, Madrid	2
Sociedad Española de Historia Natural, Madrid	2

SWEDEN

K. Biblioteket, Stockholm	1
K. Svenska Vetenskapsakademien, Stockholm	4
K. Universitets Biblioteket, Uppsala	1
K. Vetenskaps-och Vitterhets-Samhälle, Göteborg	1
K. Vitterhets Historie och Antikvitets Akademien, Stockholm	1
Svenska Sällskapet för Antropologi och Geografi, Stockholm	1

SWITZERLAND

Botanic Garden, Zürich	1
Geographisch-Ethnographische Gesellschaft, Zürich	4
Historisches Museum, Bern	1
Musée d'Histoire Naturelle, Lausanne	2
Naturforschende Gesellschaft, Bern	5
Naturforschende Gesellschaft, Zürich	1
Société Entomologique, Bern	1
Société Friburgeoise des Sciences Naturelles, Fribourg	1
Société Helvetique des Sciences Naturelles, Geneva	1
Société Neuchateloise de Géographie	2

URUGUAY

Archivo General Administrativo, Montevideo (gift)	1

WEST INDIES

Academia Nacional de Artes y Letras, Havana (gift)	1
Biological Station of Bermuda	1
Imperial Department of Agriculture, Barbadoes	1
Jamaica Institute, Kingston	1
Trinidad and Tobago Department of Agriculture, Port of Spain	2
Universidad de Habana	2

Bertrand, Paul, Lille 10
Boyd, William, Winnipeg 1
Carpenter, G. H., Dublin 1
Dunod, H., Paris 2
Gamble, J. S., Madras 1
Guppy, H. B., Exeter 1
Huard, V. A., Quebec 2
Richter, Rudolf, Frankfurt a. M. 10
Rivet, P., Paris 3
Rutot, A., Brussels 2
Schinz, Hans, Zürich 1
Schlaginhaufen, Otto, Zürich 1
Schmidt, W., Vienna 2
Schreiter, Rudolfo, Tucuman 1
Swann, H. Kirke, London 2
Wille, N., Christiania 6

ALABAMA
Agricultural Experiment Station, Auburn 1
Alabama Anthropological Society, Montgomery 1
Alabama Geological Survey, University 2

ARIZONA
Agricultural Experiment Station, Tucson 2

CALIFORNIA
Agricultural Experiment Station, Berkeley 1
California Academy of Sciences, San Francisco 1
Cooper Ornithological Club, Hollywood 1
Fish and Game Commission, San Francisco 1
Leland Stanford Junior University, Stanford University 6
Pomona College, Claremont 1
State Mining Bureau, Sacramento 4
University of California, Berkeley 9

COLORADO
Bureau of Mines, Denver 1
Colorado Museum of Natural History, Denver 1

CONNECTICUT
Agricultural Experiment Station, New Haven 3
American Oriental Society, New Haven 1
Connecticut Academy of Arts and Sciences, New Haven 1
Hartford Public Library 2
State Board of Fisheries and Game, Hartford 1
State Forester, New Haven 1
Yale University, New Haven 2

GEORGIA
Geological Survey, Atlanta 1

HAWAIIAN ISLANDS
Agricultural Experiment Station, Honolulu 1
Board of Commissions of Agriculture and Forestry, Honolulu 2
Hawaiian College, Honolulu 1
Hawaiian Entomological Society, Honolulu 1

IDAHO

Mining Industry, Boise	1
University of Idaho, Moscow	2

ILLINOIS

Agricultural Experiment Station, Urbana	2
Art Institute of Chicago	1
Chicago Historical Society	1
Department of Natural History, Urbana	1
Game and Fish Commission, Springfield	1
Hardwood Record, Chicago (gift)	1
John Crerar Library, Chicago	1
Lake Forest College	1
Lewis Institute, Chicago	1
Newberry Library, Chicago	1
Northwestern University, Evanston	1
Open Court Publishing Company, Chicago	1
State Board of Agriculture, Springfield	1
State Geological Survey, Urbana	6
State Historical Library, Springfield	2
State Museum, Springfield	1
Swift, Wallach and Company, Chicago (gift)	1
University of Chicago	4
University of Illinois, Urbana	2

INDIANA

Agricultural Experiment Station, Lafayette	1
Department of Geology and Natural Resources, Indianapolis	1
Earlham College, Richmond	1
Indiana Academy of Science, Indianapolis	1
Indiana University, Bloomington	4
Purdue University, Lafayette	1
University of Notre Dame	1

IOWA

Geological Survey, Des Moines	1
Iowa Academy of Sciences, Des Moines	2
Iowa State College, Ames	1
Iowa State Historical Department, Des Moines	1
University of Iowa, Iowa City	3

KANSAS

Agricultural Experiment Station, Manhattan	3
Geological Survey, Lawrence	1
State Board of Agriculture, Topeka	1
University of Kansas, Lawrence	1

KENTUCKY

Department of Geology and Forestry, Frankfort	1

LOUISIANA

Agricultural Experiment Station, Baton Rouge	1
State Museum, New Orleans	1

MAINE

Agricultural Experiment Station, Orono	1
Bowdoin College, Brunswick	2
Portland Public Library	1

MARYLAND

Agricultural Experiment Station, College Park	2
Horticultural Society, College Park	1
Johns Hopkins University, Baltimore	2
Maryland Institute, Baltimore	1

MASSACHUSETTS

Agricultural Experiment Station, Amherst	1
American Academy of Arts and Sciences, Boston	1
American Antiquarian Society, Boston	1
Amherst College	1
Archæological Institute of America, Boston	2
Boston Public Library	1
Boston Society of Natural History	1
Clark University, Worcester	1
Essex Institute, Salem	2
Harvard Museum of Comparative Zoology, Cambridge	3
Harvard University, Arnold Arboretum, Jamaica Plain	1
Museum of Fine Arts, Boston	2
New Bedford Public Library	2
Peabody Institute	1
Peabody Museum, Cambridge	2
Peabody Museum, Salem	1
Salem Public Library	1
Springfield City Library Association	1
Springfield Natural History Museum	1
Williams College, Williamstown	1

MICHIGAN

Agricultural Experiment Station, Agricultural College	1
Department of Parks and Boulevards, Detroit	1
Detroit Institute of Art	1
Grand Rapids Public Library	2
Michigan College of Mines, Houghton	1
Michigan State Library, Lansing	1
State Board of Library Commissions, Lansing	1
University of Michigan, Ann Arbor	2

MINNESOTA

Agricultural Experiment Station, St. Paul	2
Minneapolis Institute of Fine Arts	1
Minnesota Geological Survey, Minneapolis	1
Minnesota Historical Society, St. Paul	2
St. Paul Institute	2
University of Minnesota, Minneapolis	2

MISSISSIPPI

State Geological Survey, Jackson	1

MISSOURI

Association of Engineering Societies, St. Louis	1
Bureau of Geology and Mines, Jefferson City	1
City Art Museum, St. Louis	2
Missouri Botanical Garden, St. Louis	1
St. Louis Public Library	1

St. Louis University 1
State Historical Society, Columbia 2
Washington University, St. Louis 2

NEBRASKA

Agricultural Experiment Station, Lincoln 1
University of Nebraska, Lincoln 1

NEVADA

Agricultural Experiment Station, Carson City 3

NEW JERSEY

Agricultural Experiment Station, Trenton 6
Department of Conservation and Development, Trenton . . . 1
Newark Museum Association 2
Princeton University 1
Stevens Institute, Hoboken 1

NEW MEXICO

School of Mines, Socorro 1

NEW YORK

Agricultural Experiment Station, Geneva 3
American Geographical Society, New York 2
American Hellenic Society, New York City (gift) 1
American Institute of Mining Engineers, New York City 2
American Museum of Natural History, New York City 18
Asbestos and Mineral Corporation, New York City (gift) 1
Brooklyn Botanic Garden 2
Brooklyn Institute of Arts and Sciences 2
Buffalo Society of Natural History 1
Carnegie Foundation for the Advancement of Teaching, New York City (gift) 1
Columbia University, New York City 1
Cooper Union for the Advancement of Science and Art, New York City . 1
Cornell University, Ithaca 4
Forest and Stream Publishing Company, New York City . . . 1
Inter-American Magazine, New York City 1
Japan Society, New York City 1
Metropolitan Museum of Art, New York City 2
Museum of the American Indian, New York City 8
New York Academy of Sciences, New York City 1
New York Botanical Garden, New York City 1
New York Historical Society, New York City 1
Pratt Institute Free Library, Brooklyn 1
Public Library, New York City 1
State Library, Albany 1
State Museum, Albany 14
Staten Island Institute of Arts and Sciences, New York City . 2
Stone Publishing Company, New York City 1
Zoological Society, New York City 2

NORTH CAROLINA

Elisha Mitchell Scientific Society, Chapel Hill 1
Geological and Economic Survey, Raleigh 1

NORTH DAKOTA

University of North Dakota, University 1

OHIO

Academy of Sciences, Columbus 1
Agricultural Experiment Station, Wooster 2
Cincinnati Museum Association 1
Cleveland Museum of Art 1
Cleveland Public Library 2
Denison University, Granville 1
Lloyd Library, Cincinnati 2
Oberlin College Library 2
State Archaeological and Historical Society, Columbus 1
State University, Columbus 11
University of Cincinnati 6
Wilson Ornithological Club, Oberlin 1

OREGON

Agricultural Experiment Station, Corvallis 1
University of Oregon, Eugene 2

PENNSYLVANIA

American Philosophical Society, Philadelphia 1
Aquatic Life 2
Association of Engineering Societies, Philadelphia 1
Bryn Mawr College 1
Carnegie Institute, Pittsburgh 2
Carnegie Library, Pittsburgh 3
Carnegie Museum, Pittsburgh 2
Delaware Ornithological Club, Philadelphia 1
Pennsylvania Museum and School of Industrial Art, Philadelphia . . . 1
Philadelphia Academy of Natural Sciences 1
Philadelphia College of Pharmacy and Science 2
Philadelphia Commercial Museum 1
Sullivant Moss Society, Pittsburgh 1
Topographic and Geologic Survey, Harrisburg 1
University of Pennsylvania, Philadelphia 2
University of Pennsylvania Museum, Philadelphia 2
Wagner Free Institute of Science, Philadelphia 1
Wistar Institute of Anatomy and Biology, Philadelphia 10

PHILIPPINE ISLANDS

Bureau of Education, Manila 1
Department of Agriculture, Manila 2
Department of Interior, Bureau of Science, Manila 5

RHODE ISLAND

Agricultural Experiment Station, Kingston (gift) 1
Park Museum, Providence 1

SOUTH CAROLINA

Charleston Museum 1

SOUTH DAKOTA

Agricultural Experiment Station, Brookings 1
State Geological Survey, Madison 1

TENNESSEE

State Board of Entomology, Nashville 1
State Geological Survey, Nashville 3

TEXAS
- Agricultural Experiment Station, College Station . . . 2
- San Antonio Scientific Society . . . 1

UTAH
- University of Utah, State School of Mines, Salt Lake City . . . 1

VIRGINIA
- State Library, Richmond . . . 1
- University of Virginia, Charlottesville . . . 1
- Virginia Geological Survey, Charlottesville . . . 1
- Virginia State Forester, Charlottesville . . . 2

WASHINGTON
- State Geological Survey, Seattle (gift) . . . 1
- Washington University, Seattle . . . 14
- Washington University, Historical Society, Seattle . . . 2

WASHINGTON, D. C.
- American Mining Congress (gift) . . . 1
- National Academy of Sciences . . . 4
- National Education Association (gift) . . . 1
- Pan American Union . . . 2
- United States Government . . . 340

WISCONSIN
- Agricultural Experiment Station, Madison . . . 2
- Archaeological Society, Milwaukee . . . 1
- Beloit College . . . 2
- State Historical Society, Madison . . . 1
- State Horticultural Society, Madison . . . 2
- University of Wisconsin, Madison . . . 1

Ayer, Edward E., Chicago (gift) . . . 89
Barnes, William, Decatur . . . 1
Blatchley, W. S., Indianapolis . . . 1
Casey, Thomas, Washington, D. C., (gift) . . . 2
Chalmers, William J., Chicago (gift) . . . 2
Cockerell, T. D. A., Boulder . . . 10
Eigenmann, Carl H., Bloomington . . . 1
Evans, Alexander W., New Haven . . . 2
Farwell, John V., Chicago (gift) . . . 1
Gerhard, W. J., Chicago . . . 9
Gunnulus Collection of Personalia of Eminent Naturalists (gift) . . . 3
Holland, W. J., Pittsburgh (gift) . . . 1
Kroeber, A. L., Berkeley . . . 1
Laufer, B., Chicago . . . 6
MacCurdy, George Grant, Washington, D. C. . . . 3
Malloch, John R., Urbana (gift) . . . 2
Mason, John A., Chicago . . . 2
Millspaugh, C. F., Chicago . . . 30
Morgan, P. G., Wellington (gift) . . . 6
Morse, Edward S., Salem . . . 2
Osborn, Henry F., New York City . . . 2
Parkeny, Thomas, Chicago (gift) . . . 1
Wood, Albert Casey, Chicago (gift) . . . 1

TYPE OF CASE LOANED TO PUBLIC SCHOOLS BY THE N. W. HARRIS PUBLIC SCHOOL EXTENSION OF FIELD MUSEUM OF NATURAL HISTORY.

ARTICLES OF INCORPORATION.

STATE OF ILLINOIS.

DEPARTMENT OF STATE.

WILLIAM H. HINRICHSEN, *Secretary of State.*

TO ALL TO WHOM THESE PRESENTS SHALL COME, GREETING:

Whereas, a Certificate duly signed and acknowledged having been filed in the office of the Secretary of State, on the 16th day of September, A. D. 1893, for the organization of the COLUMBIAN MUSEUM OF CHICAGO, under and in accordance with the provisions of "An Act Concerning Corporations," approved April 18, 1872, and in force July 1, 1872, and all acts amendatory thereof, a copy of which certificate is hereto attached.

Now, therefore, I, William H. Hinrichsen, Secretary of State of the State of Illinois, by virtue of the powers and duties vested in me by law, do hereby certify that the said COLUMBIAN MUSEUM OF CHICAGO is a legally organized Corporation under the laws of this State.

In Testimony Whereof, I hereto set my hand and cause to be affixed the Great Seal of State. Done at the City of Springfield, this 16th day of September, in the year of our Lord one thousand eight hundred and ninety-three, and of the Independence of the United States the one hundred and eighteenth.

W. H. HINRICHSEN,

[SEAL.] *Secretary of State.*

TO HON. WILLIAM H. HINRICHSEN,

SECRETARY OF STATE:

SIR:

We, the undersigned citizens of the United States, propose to form a corporation under an act of the General Assembly of the State of Illinois, entitled "An Act Concerning Corporations," approved April 18, 1872, and all acts amendatory thereof; and that for the purposes of such organization we hereby state as follows, to-wit:

1. The name of such corporation is the "COLUMBIAN MUSEUM OF CHICAGO."

2. The object for which it is formed is for the accumulation and dissemination of knowledge, and the preservation and exhibition of objects illustrating Art, Archæology, Science and History.

3. The management of the aforesaid museum shall be vested in a Board of FIFTEEN (15) TRUSTEES, five of whom are to be elected every year.

4. The following named persons are hereby selected as the Trustees for the first year of its corporate existence:

Edward E. Ayer, Charles B. Farwell, George E. Adams, George R. Davis, Charles L. Hutchinson, Daniel H. Burnham, John A. Roche, M. C. Bullock, Emil G. Hirsch,

James W. Ellsworth, Allison V. Armour, O. F. Allis, Edwin Walker, John C. Black and Frank W. Gunsaulus.

5. The location of the Museum is in the City of Chicago, County of Cook, and State of Illinois.

(*Signed*),

George E. Adams, C. B. Farwell, Sidney C. Eastman, F. W. Putnam, Robert McMurdy, Andrew Peterson, L. J. Gage, Charles L. Hutchinson, Ebenezer Buckingham, Andrew McNally, Edward E. Ayer, John M. Clark, Herman H. Kohlsaat, George Schneider, Henry H. Getty, William R. Harper, Franklin H. Head, E. G. Keith, J. Irving Pearce, Azel F. Hatch, Henry Wade Rogers, Thomas B. Bryan, L. Z. Leiter, A. C. Bartlett, A. A. Sprague, A. C. McClurg, James W. Scott, Geo. F. Bissell, John R. Walsh, Chas. Fitzsimmons, John A. Roche, E. B. McCagg, Owen F. Aldis, Ferdinand W. Peck, James H. Dole, Joseph Stockton, Edward B. Butler, John McConnell, R. A. Waller, H. C. Chatfield-Taylor, A. Crawford, Wm. Sooy Smith, P. S. Peterson, John C. Black, Jno. J. Mitchell, C. F. Gunther, George R. Davis, Stephen A. Forbes, Robert W. Patterson, Jr., M. C. Bullock, Edwin Walker, George M. Pullman, William E. Curtis, James W. Ellsworth, William E. Hale, Wm. T. Baker, Martin A. Ryerson, Huntington W. Jackson, N. B. Ream, Norman Williams, Melville E. Stone, Bryan Lathrop, Elphalet W. Blatchford, Philip D. Armour.

STATE OF ILLINOIS }
COOK COUNTY } ss.

I, G. R. MITCHELL, a NOTARY PUBLIC in and for said County, do hereby certify that the foregoing petitioners personally appeared before me and acknowledged severally that they signed the foregoing petition as their free and voluntary act for the uses and purposes therein set forth.

Given under my hand and notarial seal this 14th day of September, 1893.

G. R. MITCHELL,
[SEAL.] NOTARY PUBLIC, COOK COUNTY, ILL.

CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the corporate members held the 25th day of June, 1894, the name of the COLUMBIAN MUSEUM was changed to FIELD COLUMBIAN MUSEUM. A certificate to this effect was filed June 26, 1894, in the office of the Secretary of State for Illinois.

CHANGE OF NAME.

Pursuant to a resolution passed at a meeting of the corporate members held the 8th day of November, 1905, the name of the FIELD COLUMBIAN MUSEUM was changed to FIELD MUSEUM OF NATURAL HISTORY. A certificate to this effect was filed November 10, 1905, in the office of the Secretary of State for Illinois.

CHANGE IN ARTICLE 3.

Pursuant to a resolution at a meeting of the corporate members held the 12th day of May, 1920, the management of FIELD MUSEUM OF NATURAL HISTORY shall be invested in a Board of TWENTY-ONE (21) TRUSTEES, who shall be elected in such manner and for such time and term of office as may be provided for by the By-Laws.

AMENDED BY-LAWS.

(JANUARY 1, 1921.)

ARTICLE 1.

MEMBERS.

SECTION 1. Members shall be of seven classes, Corporate Members, Honorary Members, Patrons, Life Members, Associate Members, Sustaining Members, and Annual Members.

SECTION 2. The Corporate Members shall consist of the persons named in the articles of incorporation, and of such other persons as shall be chosen from time to time by the Board of Trustees at any of its meetings, upon the recommendation of the Executive Committee; provided, that such person named in the articles of incorporation shall, within ninety days from the adoption of these By-Laws, and persons hereafter chosen as Corporate Members shall, within ninety days of their election, pay into the treasury the sum of twenty ($20.00) dollars or more. Corporate Members becoming Life Members, Patrons or Honorary Members shall be exempt from dues. Annual meetings of said Corporate Members shall be held at the same place and on the same day that the annual meeting of the Board of Trustees is held.

SECTION 3. Honorary Members shall be chosen by the Board from among persons who have rendered eminent service to science, and only upon unanimous nomination of the Executive Committee. They shall be exempt from all dues.

SECTION 4. Patrons shall be chosen by the Board upon recommendation of the Executive Committee from among persons who have rendered eminent service to the Museum. They shall be exempt from all dues, and, by virtue of their election as Patrons, shall also be Corporate Members.

SECTION 5. Any person paying into the treasury the sum of five hundred ($500.00) dollars, at any one time, shall, upon the unanimous vote of the Board, become a Life Member. Life Members shall be exempt from all dues, and shall enjoy all the privileges and courtesies of the Museum that are accorded to members of the Board of Trustees.

SECTION 6. Any person paying into the treasury of the Museum the sum of one hundred ($100.00) dollars, at any one time, shall, upon the unanimous vote of the Board, become an Associate Member. Associate Members shall be entitled to: tickets admitting member and members of family, including non-resident home guests, all publications of the Museum, if so desired; reserved seats to all lectures and entertainments under the auspices of the Museum, provided reservation is requested in advance, and admission of holder of membership and accompanying party to all special exhibits and Museum functions day or evening.

SECTION 7. Sustaining Members shall consist of such persons as are selected from time to time by the Board of Trustees at any of its meetings, and who shall pay an annual fee of twenty-five ($25.00) dollars, payable within thirty days after

notice of election and within thirty days after each recurring annual date. This Sustaining Membership entitles the member to free admission for the member and family to the Museum on any day and allows 25 admission coupons, which may be used by any one, the Annual Report and such other Museum documents or publications as may be requested in writing. When a Sustaining Member has paid the annual fee of $25.00 for six years, such member shall be entitled to become an Associate Member.

SECTION 8. Annual Members shall consist of such persons as are selected from time to time by the Board of Trustees at any of its meetings, and who shall pay an annual fee of ten ($10.00) dollars, payable within thirty days after each recurring annual date. An Annual Membership shall entitle the member to a card of admission for the member and family during all hours when the Museum is open to the public, and free admission for the member and family to all Museum lectures or entertainments. This membership will also entitle the holder to the courtesies of the membership privileges of every Museum of note in the United States and Canada, so long as the existing system of cooperative interchange of membership tickets shall be maintained, including tickets for any lectures given under the auspices of any of the Museums during a visit to the cities in which the cooperative museums are located.

ARTICLE II.

BOARD OF TRUSTEES.

SECTION 1. The Board of Trustees shall consist of twenty-one members. The respective members of the Board now in office, and those who shall hereafter be elected, shall hold office during life. Vacancies occurring in the Board shall be filled at a regular meeting of the Board, upon the nomination of the Executive Committee made at a preceding regular meeting of the Board, by a majority vote of the members of the Board.

SECTION 2. Regular meetings of the Board shall be held on the third Monday of each month. Special meetings may be called at any time by the President, and shall be called by the Secretary upon the written request of three Trustees. Five Trustees shall constitute a quorum, except for the election of officers or the adoption of the Annual Budget, when seven Trustees shall be required, but meetings may be adjourned by any less number from day to day, or to a day fixed, previous to the next regular meeting.

SECTION 3. Reasonable written notice, designating the time and place of holding meetings, shall be given by the Secretary.

ARTICLE III.

HONORARY TRUSTEES.

SECTION 1. As a mark of respect, and in appreciation of services performed for the Institution, those Trustees who by reason of inability, on account of change of residence, or for other cause or from indisposition to serve longer in such capacity shall resign their place upon the Board, may be elected, by a majority of those present at any regular meeting of the Board, an Honorary Trustee for life. Such Honorary Trustee will receive notice of all meetings of the Board of Trustees, whether regular or special, and will be expected to be present at all such meetings and participate in the deliberations thereof, but an Honorary Trustee shall not have the right to vote.

ARTICLE IV.

OFFICERS.

SECTION 1. The officers shall be a President, a First Vice-President, a Second Vice-President, a Secretary, an Assistant Secretary and a Treasurer. They shall be chosen by ballot by the Board of Trustees, a majority of those present and voting being necessary to elect. The President, the First Vice-President, and the Second Vice-President shall be chosen from among the members of the Board of Trustees. The meeting for the election of officers shall be held on the third Monday of January of each year, and shall be called the Annual Meeting.

SECTION 2. The officers shall hold office for one year, or until their successors are elected and qualified, but any officer may be removed at any regular meeting of the Board of Trustees by a vote of two-thirds of all the members of the Board. Vacancies in any office may be filled by the Board at any meeting.

SECTION 3. The officers shall perform such duties as ordinarily appertain to their respective offices, and such as shall be prescribed by the By-Laws, or designated from time to time by the Board of Trustees.

ARTICLE V.

THE TREASURER.

SECTION 1. The Treasurer shall be custodian of the funds of the Corporation except as hereinafter provided. He shall make disbursements only upon warrants drawn by the Director and countersigned by the President. In the absence or inability of the Director, warrants may be signed by the Chairman of the Finance Committee, and in the absence or inability of the President, may be countersigned by one of the Vice-Presidents. But no warrant shall be issued, except in conformity with a regularly prepared voucher, giving the name of the payee and stating the occasion for the expenditure, and verified and approved as hereinafter prescribed. It shall be no part of the duties of the Treasurer to see that the warrants have been issued in conformity with such vouchers.

SECTION 2. The securities and muniments of title belonging to the corporation shall be placed in the custody of some Trust Company of Chicago to be designated by the Board of Trustees, which Trust Company shall collect the income and principal of said securities as the same become due, and pay same to the Treasurer, except as hereinafter provided. Said Trust Company shall allow access to and deliver any or all securities or muniments of title to the joint order of the following officers, namely: The President or one of the Vice-Presidents, jointly with the Chairman, or one of the Vice-Chairmen, of the Finance Committee of the Museum.

SECTION 3. The Treasurer shall give bond in such amount, and with such sureties as shall be approved by the Board of Trustees.

SECTION 4. All vouchers executed for the payment of liabilities incurred in the administration of the Museum, shall be verified by the Auditor, and approved for payment by the Director, and a member of the Executive Committee. All vouchers executed for expenditures for the construction or reconstruction of the Museum building, or buildings, shall be verified by the Auditor and approved for payment by the Chairman of the Building Committee. All vouchers executed in connection with the investments of the Corporation, or, in any way having to do with

the endowment funds of the Corporation, shall be verified by the Auditor and approved for payment by the Chairman of the Finance Committee.

SECTION 5. The Harris Trust & Savings Bank of Chicago shall be Custodian of "The N. W. Harris Public School Extension of Field Museum" fund. The bank shall make disbursements only upon warrants drawn by the Director and countersigned by the President. In the absence or inability of the Director, warrants may be signed by the Chairman of the Finance Committee, and in the absence or inability of the President, may be countersigned by the Vice-Presidents. But no warrant shall be issued, except in conformity with a regularly prepared voucher, giving the name of the payee and stating the occasion for the expenditure, and verified and approved by the Auditor, the Director, and a member of the Executive Committee. It shall be no part of the duties of the said Custodian to see that the warrants have been issued in conformity with such vouchers.

ARTICLE VI.

THE DIRECTOR.

SECTION 1. The Board of Trustees shall elect a Director of the Museum, who shall remain in office until his successor shall be elected. He shall have immediate charge and supervision of the Museum, and shall control the operations of the Institution, subject to the authority of the Board of Trustees and its Committees. The Director shall be the official medium of communication between the Board, or its Committees, and the scientific staff and maintenance force.

SECTION 2. There shall be four scientific departments of the Museum—Anthropology, Botany, Geology and Zoölogy; each under the charge of a Curator, subject to the authority of the Director. The Curators shall be appointed by the Board upon the recommendation of the Director, and shall serve during the pleasure of the Board. Subordinate staff officers in the scientific departments shall be appointed and removed by the Director upon the recommendation of the Curators of the respective Departments. The Director shall have authority to employ and remove all other employees of the Museum.

SECTION 3. The Director shall make report to the Board at each regular meeting, recounting the operations of the Museum for the previous month. At the Annual Meeting, the Director shall make an Annual Report, reviewing the work of the Museum for the previous year, which Annual Report shall be published in pamphlet form for the information of the Trustees and Members, and for free distribution in such number as the Board may direct.

ARTICLE VII.

AUDITOR.

SECTION 1. The Board shall appoint an Auditor, who shall hold his office during the pleasure of the Board. He shall keep proper books of account, setting forth the financial condition and transactions of the Corporation, and of the Museum, and report thereon at each regular meeting, and at such other times as may be required by the Board. He shall certify to the correctness of all vouchers for the expenditure of the money of the Corporation.

ARTICLE VIII.

COMMITTEES.

SECTION 1. There shall be five Committees, as follows: Finance, Building, Auditing, Pension and Executive.

SECTION 2. The Finance Committee shall consist of five members, the Auditing and Pension Committees shall each consist of three members, and the Building Committee shall consist of five members. All members of these four Committees shall be elected by ballot by the Board at the Annual Meeting, and shall hold office for one year, and until their successors are elected and qualified. In electing the members of these Committees, the Board shall designate the Chairman and Vice-Chairman by the order in which the members are named in the respective Committee; the first member named shall be Chairman, the second named the Vice-Chairman, and the third named, Second Vice-Chairman, succession to the Chairmanship being in this order in the event of the absence or disability of the Chairman.

SECTION 3. The Executive Committee shall consist of the President of the Board, the Chairman of the Finance Committee, the Chairman of the Building Committee, the Chairman of the Auditing Committee, the Chairman of the Pension Committee, and three other members of the Board to be elected by ballot at the Annual Meeting.

SECTION 4. Four members shall constitute a quorum of the Executive Committee, and in all standing Committees two members shall constitute a quorum. In the event that, owing to the absence or inability of members, a quorum of the regularly elected members cannot be present at any meeting of any Committee, then the Chairman thereof, or his successor, as herein provided, may summon any members of the Board of Trustees to act in place of the absentee.

SECTION 5. The Finance Committee shall have supervision of investing the endowment and other permanent funds of the Corporation, and the care of such real estate as may become its property. It shall have authority to invest, sell, and reinvest funds, subject to the approval of the Board.

SECTION 6. The Building Committee shall have supervision of the construction, reconstruction, and extension of any and all buildings used for Museum purposes.

SECTION 7. The Executive Committee shall be called together from time to time as the Chairman may consider necessary, or as he may be requested to do by three members of the Committee, to act upon such matters affecting the administration of the Museum as cannot await consideration at the Regular Monthly Meetings of the Board of Trustees. It shall, before the beginning of each fiscal year, prepare and submit to the Board an itemized Budget, setting forth the probable receipts from all sources for the ensuing year, and make recommendations as to the expenditures which should be made for routine maintenance and fixed charges. Upon the adoption of the Budget by the Board, the expenditures as stated are authorized.

SECTION 8. The Auditing Committee shall have supervision over all accounting and bookkeeping, and full control of the financial records. It shall cause the same, once each year, or oftener, to be examined by an expert individual or firm, and shall transmit the report of such expert individual or firm to the Board at the next ensuing regular meeting after such examination shall have taken place.

SECTION 9. The Pension Committee shall determine by such means and processes as shall be established by the Board of Trustees to whom and in what amount the Pension Fund shall be distributed. These determinations or findings shall be subject to the approval of the Board of Trustees.

SECTION 10. The Chairman of each Committee shall report the acts and proceedings thereof at the next ensuing regular meeting of the Board.

SECTION 11. The President shall be ex-officio a member of all Committees and Chairman of the Executive Committee. Vacancies occurring in any Committee may be filled by ballot at any regular meeting of the Board.

ARTICLE IX.

NOMINATING COMMITTEE.

SECTION 1. At the November meeting of the Board, each year a Nominating Committee of three shall be chosen by lot. Said Committee shall make nominations for membership of the Finance Committee, the Building Committee, the Auditing Committee, and the Pension Committee, and for three members of the Executive Committee, from among the Trustees, to be submitted at the ensuing December meeting and voted upon at the following Annual Meeting in January.

ARTICLE X.

SECTION 1. Whenever the word "Museum" is employed in the By-Laws of the Corporation, it shall be taken to mean the building in which the Museum as an Institution is located and operated, the material exhibited, the material in study collections, or in storage, furniture, fixtures, cases, tools, records, books, and all appurtenances of the Institution, and the workings, researches, installations, expenditures, field work, laboratories, library, publications, lecture courses, and all scientific and maintenance activities.

SECTION 2. These By-Laws may be amended at any regular meeting of the Board of Trustees by a two-thirds vote of all the members present, provided the amendment shall have been proposed at a preceding regular meeting.

AMERICAN BISON.
Single bull mounted for new hall of horned and hoofed mammals.
J. Friesser, Taxidermist.

HONORARY MEMBERS.

AYER, EDWARD E.
BLACKSTONE, MRS. TIMOTHY B.
CORY, CHARLES B.
FIELD, STANLEY
McCORMICK, STANLEY

PATRONS.

ARMOUR, ALLISON V.
BUTLER, EDWARD B.
COLLINS, ALFRED M.
DAY, LEE GARNETT
GRAHAM, ERNEST R.
GUNSAULUS, FRANK W.
HUTCHINSON, CHARLES L.
KENNEDY, VERNON SHAW
MANIERRE, GEORGE
MARKHAM, CHARLES H.
MILLER, JOHN S.
PAYNE, JOHN BARTON
SARGENT, HOMER E.
SIMPSON, JAMES
SKIFF, FREDERICK J. V.
SMITH, WILLARD A.
WILSON, JOHN P.

CORPORATE MEMBERS.

ALDIS, OWEN F.
ARMOUR, ALLISON V.
AYER, EDWARD E.

BARTLETT, A. C.
BLAIR, WATSON F.
BORDEN, JOHN
BUTLER, EDWARD B.

CHALMERS, W. J.
CHATFIELD-TAYLOR, H. C.
COLLINS, ALFRED M.
CRANE, RICHARD T., JR.

DAY, LEE GARNETT

EASTMAN, SIDNEY C.
ELLSWORTH, JAMES W.

FIELD, MARSHALL
FIELD, STANLEY

GAGE, LYMAN J.
GRAHAM, ERNEST R.
GUNSAULUS, FRANK W.

HARRIS, ALBERT W.
HUTCHINSON, CHARLES L.

JONES, ARTHUR B.

KEEP, CHAUNCEY
KENNEDY, VERNON SHAW
KOHLSAAT, HERMAN H.

McCORMICK, CYRUS H.
MANIERRE, GEORGE
MARKHAM, CHARLES H.
MILLER, JOHN S.
MITCHELL, JOHN J.

PAYNE, JOHN BARTON
PECK, FERDINAND W.
PORTER, GEORGE F.

RYERSON, MARTIN A.

SARGENT, HOMER E.
SIMPSON, JAMES
SKIFF, FREDERICK J. V.
SMITH, SOLOMON A.
SMITH, WILLARD A.
SPRAGUE, ALBERT A.
STONE, MELVILLE E.

WILSON, JOHN P.
WRIGLEY, WILLIAM, JR.

DECEASED, 1920.

GUNTHER, C. F.

LIFE MEMBERS.

ALDIS, ARTHUR T.
ALDIS, OWEN F.
ALLEN, BENJAMIN
ALLERTON, ROBERT H.
ARMOUR, A. WATSON

BAKER, MISS ISABELLE
BANKS, ALEXANDER F.
BARRELL, FINLEY
BARRETT, MRS. A. D.
BARRETT, ROBERT L.
BARTLETT, A. C.
BASSFORD, LOWELL C.
BEALE, WILLIAM G.
BECKER, A. G.
BILLINGS, C. K. G.
BILLINGS, FRANK
BLACKSTONE, MRS. T. B.
BLAINE, MRS. EMMONS
BLAIR, HENRY A.
BLAIR, WATSON F.
BLOCK, P. D.
BOOTH, W. VERNON
BORDEN, JOHN
BOYNTON, C. T.
BRIDGE, NORMAN
BREWSTER, WALTER S.
BROWN, WILLIAM L.
BUCHANAN, D. W.
BUFFINGTON, EUGENE J.
BURNHAM, JOHN
BUTLER, EDWARD B.
BYLLESBY, H. M.

CARR, CLYDE M.
CARRY, EDWARD F.
CARTON, L. A.
CHALMERS, WILLIAM J.
CLARK, EUGENE B.
CLAY, JOHN
CLOW, WILLIAM E.
COBE, IRA M.
CRAMER, CORWITH
CRANE, CHARLES RICHARD
CRANE, RICHARD T., JR.
CROWELL, H. P.
CUDAHY, JOSEPH M.
CUMMINGS, D. MARK
CUNNINGHAM, FRANK S.

DAU, J. J.
DAWES. CHARLES G.
DAY, ALBERT M.
DECKER, ALFRED
DEERING, CHARLES
DEERING, JAMES
DEFREES, JOSEPH H.
DELANO, FREDERIC A.
DICK, ALBERT BLAKE
DONNELLEY, REUBEN H.
DONNELLEY, THOMAS E.
DRAKE, JOHN B.
DRAKE, TRACY C.

ECKHART, B. A.

FAIR, ROBERT M.
FARNUM, HENRY W.
FARWELL, JOHN V.
FARWELL, WALTER
FAY, C. N.
FELT, DORR E.
FERNALD, GUSTAVUS S.
FIELD, MARSHALL
FIELD, STANLEY
FORGAN, DAVID R.
FORGAN, JAMES B.
FORSYTH, ROBERT

GARTZ, A. F.
GARY, JOHN W.
GETZ, GEORGE F.
GODDARD, LEROY A.
GOODMAN, WILLIAM O.
GOODRICH, A. W.
GRISCOM, CLEMENT A.
GROMMES, JOHN B.

HAMILL, ERNEST A.
HASKELL, FREDERICK T.

HASTINGS, SAMUEL M.
HIBBARD, FRANK
HILL, LOUIS W.
HINDE, THOMAS W.
HOPKINS, L. J.
HOROWITZ, L. J.
HOXIE, MRS. JOHN R.
HOYT, N. LANDON
HUGHITT, MARVIN
HULBERT, E. D.
HULBURD, CHARLES H.
HUTCHINS, JAMES C.
HUTCHINSON, C. L.

INSULL, SAMUEL

JELKE, JOHN F.
JOHNSON, MRS. ELIZABETH AYER
JOHNSON, FRANK S.
JONES, ARTHUR B.
JONES, DAVID B.
JONES, THOMAS D.

KEEP, CHAUNCEY
KELLER, THEODORE C.
KELLEY, WILLIAM V.
KING, FRANCIS
KING, JAMES G.
KIRK, WALTER RADCLIFFE

LAMONT, ROBERT P.
LAWSON, VICTOR F.
LEHMANN, E. J.
LEONARD, CLIFFORD M.
LOGAN, SPENCER H.
LORD, JOHN B.
LOWDEN, FRANK O.
LYTTON, HENRY C.

McCORMICK, MRS.
McCORMICK, CYRUS H.
McCORMICK, HAROLD F.
McELWEE, ROBERT H.
McKINLAY, JOHN
McKINLOCK, GEORGE ALEXANDER
McLAUGHLIN, FREDERIC
McLAUGHLIN, GEO. D.
McLENNAN, D. R.
McWILLIAMS, LAFAYETTE
MacVEAGH, FRANKLIN

MARK, CLAYTON
MARTIN, WILLIAM P.
MASON, WILLIAM S.
MINER, W. H.
MITCHELL, JOHN J.
MOORE, EDWARD S.
MORSE, CHARLES H., JR.
MORTON, JOY
MORTON, MARK
MUNROE, CHARLES A.

NATHAN, ADOLPH
NEWELL, A. B.

ORR, ROBERT M.

PALMER, HONORE
PALMER, POTTER
PAM, MAX
PATTEN, HENRY J.
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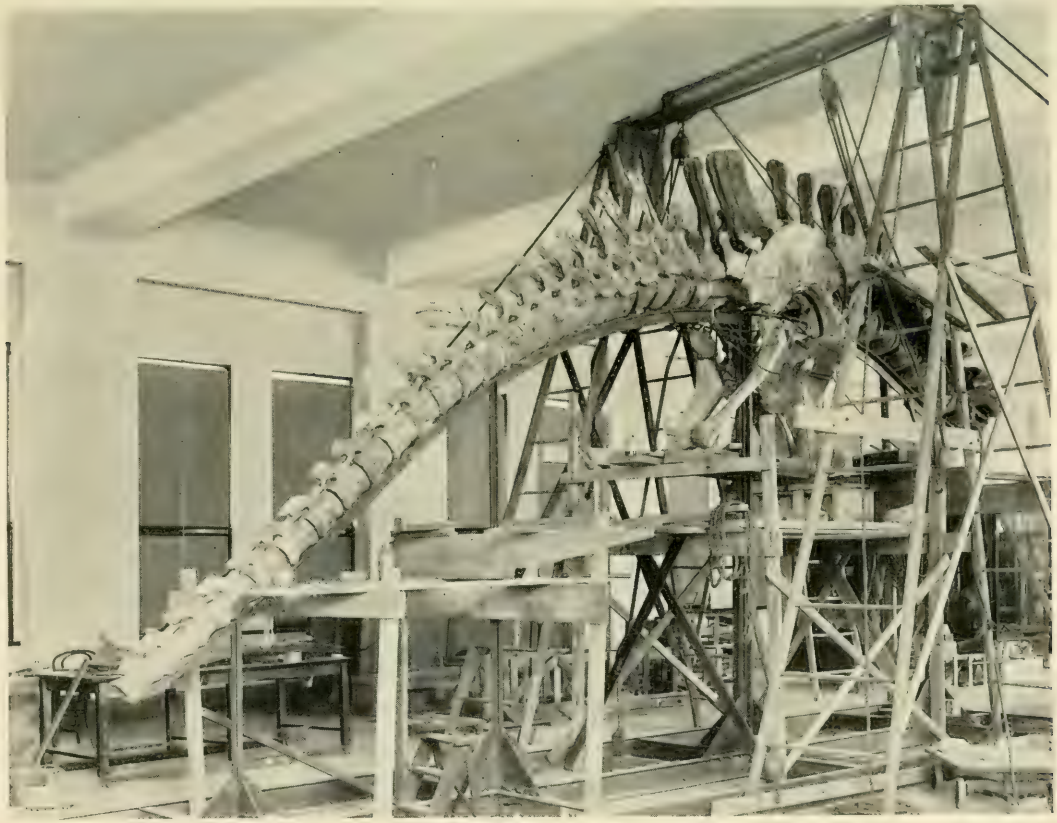

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